Plastic Service Group

Operating Instructions

TEMPSoft2

CE

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1 Introduction

This operating manual describes the full function scope of the **TEMPSoft2** operating software.

TEMPSoft2 can be used for the following hot runner controllers.

Hot Runner Controllers	
profiTEMP	
TEMP-Command	On basis of multi loop controllers flexotemp® PCU/MCU.

TEMPSoft2 has to be configured, to work together with the hot runner controllers (see chapter ↗Configuration).

Information on the hot runner controllers and/or on the individual controller types, such as type of housing, connector pin assignment, configuration and adjustment over parameters, etc. can be found in the specific operating manuals.

1.1 Typographical Conventions

Symbols and conventions are used in this document for faster orientation for you.

Symbols

	Caution	With this symbol, references and information are displayed which are decisive for the operation of the device. In case of non-compliance with or inaccurate compliance there can result damage to the device or injuries to persons.
	Note	The symbol refers to additional information and declarations, which serve for improved understanding.
	Example	With the symbol, a function is explained by means of an example.
	Reference	With this symbol, information in another document is referred to.
	FAQ	Here FAQ (Frequently Asked Questions) are answered.
↗		Cross references are marked with the character f. In the pdf version of the document the objective of the cross reference is reached via the link.
`Equations`		Calculation specifications and examples are represented in this way.
<View>		Menu points (e.g. view) are represented in this way.
|Project|		Windows (e.g. project) are represented in this way.
n.a.		Not applicable, not existing

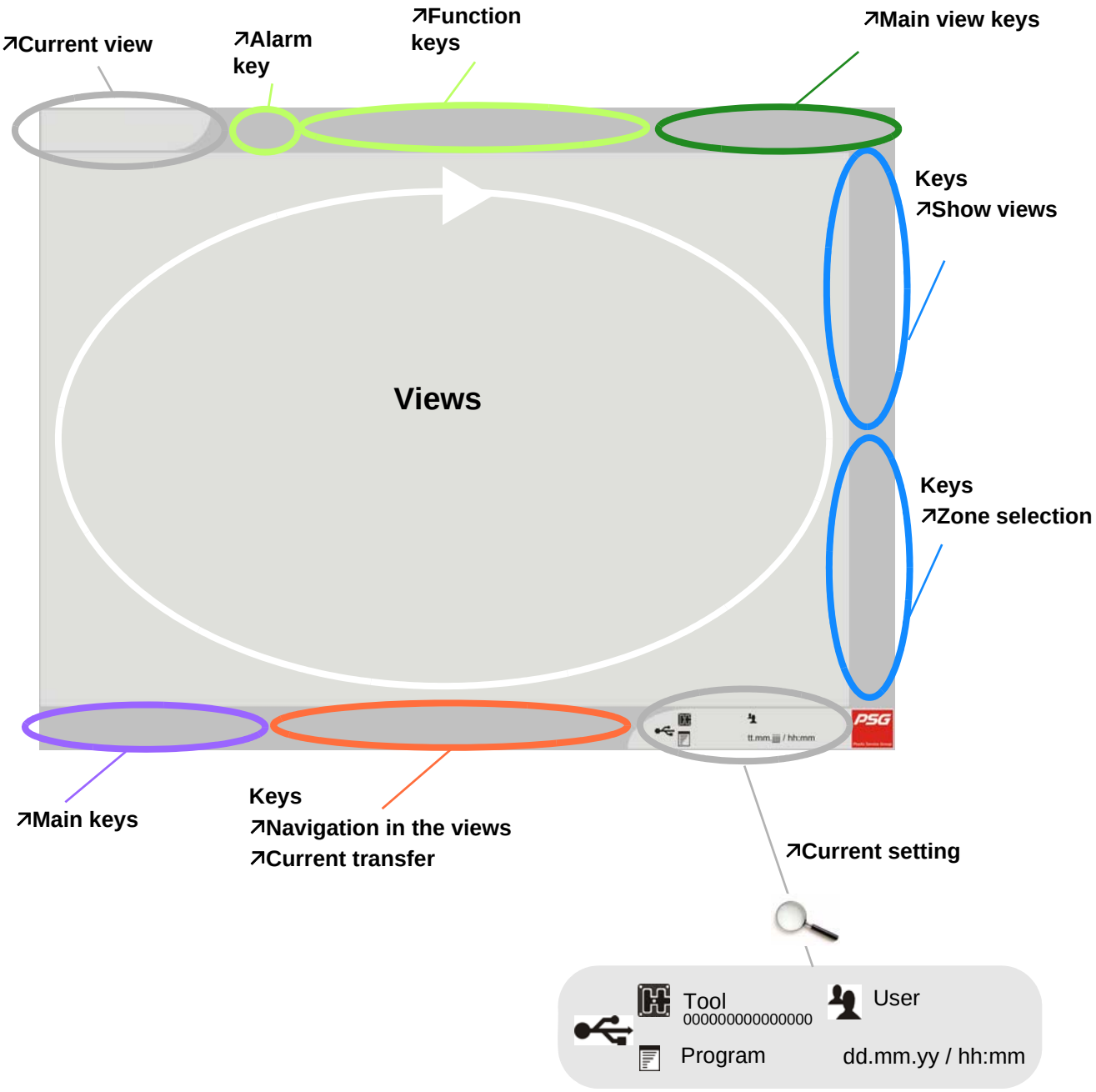
1.2 Additional and continuative documents

Parameters	Information on this topic are in the parameter description of the appropriate hot runner controller. **Temperature Control System flexotemp® Parameter** **Hot runner controllers profiTEMP Parameters**
Protocol PSG II	Information on this topic are in the protocol description **PSG II** and the corresponding object lists.
Protocol PSG II Ethernet	Information on this topic are in the protocol description **PSG II Ethernet** and the corresponding object lists.
Protocol Modbus	Information on this topic are in the protocol description **Modbus** and the corresponding object lists.
Protocol Modbus/TCP	Information on this topic are in the protocol description **Modbus/TCP** and the corresponding object lists.
Protocol CANopen	Information on this topic are in the protocol description **CANopen** and the corresponding object lists.
Data sheets and operating manuals	Available by Internet see www.psg-online.de

Technical changes reserved

2 Operation by TEMPSoft2 - general specification

Overview of displays and operation elements for **TEMPSoft2** dependent on basic display.



2.1 Current view

The current view is marked by the key symbol, that called it, and text**.**

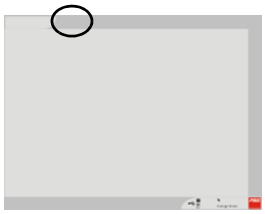
Display of available views by click on the current view (see chapter ↗Viewer)

(Views: All, v_a, v_b)

The view zone is displayed.

2.2 Alarm key

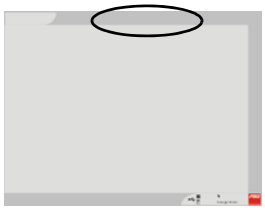
The alarm key is presented in front of the function keys in all views. Whether the alarm key is visible for the user, see chapter ↗User Administration.



No alarms		By selection of the key, the alarm view is displayed (see chapter ↗Alarms).
There are persistent alarms		By selection of the key, the alarm view is displayed (see chapter ↗Alarms).

2.3 Function keys

The function keys are presented in all views, at the same place. Which keys are visible for the user, see chapter ↗User Administration.



The last view is displayed again		Are the keys for ↗Show views not visible, by this key it is switched to the last displayed view. See chapter ↗Show views
Tool management		See Chapter↗Tool management
MoldCheck		See Chapter↗MoldCheck

MoldSnapshot		See Chapter↗MoldSnapshot
Group		See Chapter↗Group
Quality management		See Chapter↗Quality management
Quality management InfoBoard		Are there messages in the ↗InfoBoard, this is shown in the key symbol.
User Administration		See Chapter↗User Administration
Program		See Chapter↗Program
User defined view		See Chapter↗View
Process Monitoring		See Chapter↗Process Monitoring
Setting		See Chapter↗Setting

2.4 Main view keys

All keys for the main views are presented in all views, at the same place.

Help		By selection of the key, a view with appropriate ↗Online Help is displayed. As long as the online help is shown, the key appears pressed. The online help is removed by re-selection of the key.
Previous		By selection of the key, the previous views can be recalled. Key only active, when previous views are available.

Next		By selection of the key, the next views can be recalled. Key only active, when next views are available.
		The circular buffer for previous/next view covers maximum 20 views.
Home		By selection of the key, the Home view is displayed (see chapter ↗TEMPSoft2 Setting - Program settings ↗Home view).

2.5 Online Help

The online help shows the related chapter in the operating instructions.
Within the operating instructions can be navigated using the following keys.

Navigation keys				
Change zoom level				
(see chapter ↗Views)	Scroll backwards	Scroll forwards	Zoom out	Zoom in

2.6 Show views

In the view zone, the presentation of the zones can be changed by the different views here. Which views are visible for the user, see chapter ↗User Administration - Views.

Zone		See Chapter↗Zone view
Detail		See Chapter↗Detail view !The view may differ slightly for the different hot runner controllers (e.g.parameters).
Parameters		See Chapter↗Parameter view !The view may differ slightly for the different hot runner controllers (e.g.parameters).
Single parameter		See Chapter↗Single parameter view !The view may differ slightly for the different hot runner controllers (e.g.parameters).
All		See Chapter↗Parameter view
Bar		See Chapter↗Bar chart view

Difference bar charts		See Chapter↗Difference bar chart view
Trend		See Chapter↗Trend view
User defined view		See Chapter↗User defined view

2.7 Main keys

The main keys are presented in all views, at the same place. Which main keys are visible for the user, see chapter ↗User Administration - Main buttons.

Heating		See Chapter↗Heating
Standby		See Chapter↗Standby
Boost		See chapter ↗Boost
Login/Logout		See chapter ↗Login/Logout

2.8 Navigation in the views

With which keys can be navigated in the displayed views, is described per ↗Views. Which keys are visible for the user, see chapter ↗User Administration - Views.

2.9 Current transfer

The key for current transfer is in all views (except trend) visible. Which keys are visible for the user, see chapter ↗User Administration - Views.

See chapter ↗Current display and execute current transfer

2.10 Current setting

The user sees here, which settings regarding USB stick, tool, program and user are currently active.

USB stick		As soon as an USB stick is identified by **TEMPSoft2** and ready for use, this symbol is shown. See ↗Display format.
Tool		Here the name of the currently active tool is shown (see chapter ↗Tool management). 0000000000000000 is shown, when the tool coding in **TEMPSoft2** is evaluated (see chapter ↗Tool Coding)
Program		Here the name of the currently active program is shown (see chapter ↗Program). * in front of the name means, that the program in **TEMPSoft2** was changed.
User		Here the name of the currently active user is shown (see chapter ↗Login/Logout).
dd.mm.yy / hh:mm		Current date with time

2.11 Generally

Exemplary displays/views

The displays/views presented are exemplarily, because
- settings by ↗User Administration may have been modified compared to the standard delivery
- other users are logged in
- other tools and programs are active
- other current views are shown
- an USB stick is connected or not

etc.

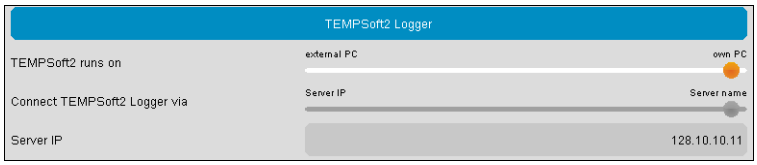
Deactivated keys

Deactivated keys for the function are **GRAY**.

Example: ALARM ACKNOWLEDGE key is deactivated, because the are no alarms to be acknowledged.

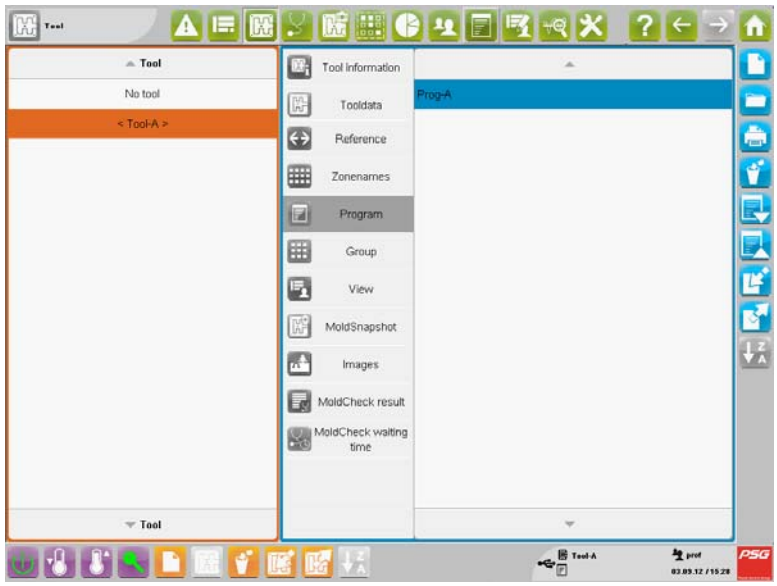
Deactive elements

Deactive elements are shown on a **GRAYED** background and are not editable.



View window vertically divided

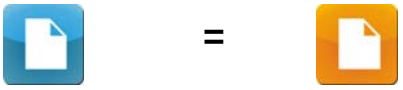
Is the view window vertically divided and a data entry has to done in both windows, the **orange** keys are valid for the **orange** marked fields; the **blue** keys are valid for the **blue** marked fields.



Color of key

The keys are normally **blue**, when they are arranged in the views. They can also be **orange**, when they are arranged in sub menus in different places. The keys have in both cases the same function.

For the same function but other color of key, both keys are displayed here.



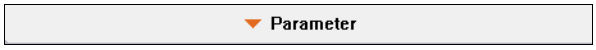
Only one key is described.

Scroll parameters

If e.g. more parameters (or zones) are existing than represented in the view, the view can be scrolled by the **orange** colored arrows.

E.g. scroll parameter up

E.g. scroll parameter down



Scroll faster (only log book)

To scroll faster, double click on the **orange** arrow and keep the arrow with the second click pressed.

Change of a parameter for not visible zones

Are more zones selected, than visible in the zone selection field, the operator gets a message, when he wants to change a parameter. He can decide, whether to proceed or to cancel the data entry for the not visible zones.

Parameters

The hot runner controllers sometimes have different parameters and parameter names. Referenced in this document on parameters and parameter names, the presentation appears as follows

|pT[*****] <parameter>|
|TC[*****] <parameter>|

pT means profiTEMP, TC means TEMP-Command.
[*****] designation / characteristic analog of the configuration parameter of the hot runner controller.
<parameter> Parameter label.
Details see document parameter description Hot Runner Controller (see chapter ↗Additional and continuative documents).

Display format

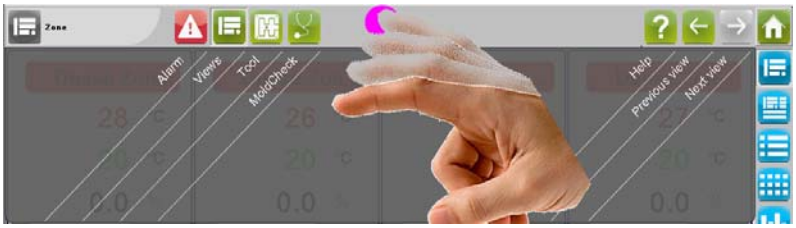
The illustrations are generally based on the hot runner controller profiTEMP. The function sequences are the same for all hot runner controllers. Deviations, e.g. in parameters, are indicated.

Technical changes reserved

Create Screenshot

PSG Plastic Service Group	To create a screenshot keep logo pressed until a message is displayed, that the screenshot is created, USB stick (!) must be plugged in. (in mouse operation: click on logo with secondary mouse key briefly, wait for message)

Show text for keys

By click on the framing area of the keys, hold and drag to the middle and/or by click with the secondary mouse key, the texts for the keys appear.	

Alphabetical sorting

As soon as more than one tool and/or user is created in ↗Tool management or ↗User Administration, the names can be sorted in ascending or descending alphabetical order.	Sorting in ascending order	Sorting in descending order

3 Views

Show views

In total, **TEMPSoft2** has 6 different representation forms for the display of zones. On the one hand, this offers the possibility to view zones in an individual favorite view, on the other hand enables very convenient operation, depending on the application.
Change can be implemented as desired between the individual representation types.

Navigation in the views

If more zones are existing, than can be represented in the view, the keys for simple navigation in the views.

Scroll backwards		Is only one zone selected, it is scrolled zone by zone.
Scroll forwards		Are more zones selected, it is scrolled between these zones.
Go to		In the overview all zones are displayed. By selection of a zone in the overview, this zone is displayed in the view. Is the ZONE view concerned, the selected zone is shown upper left.

are available. The zoom level of the view

Zoom out	
Zoom in	

remains at scrolling.

Change setting	The visible and therefore operable views for the user are assigned by ↗User Administration.

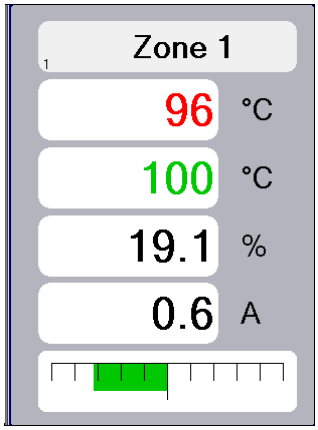
3.1 Zone view

In the Zone view, the zones are represented with their important characteristics dependent on the zoom level. The smaller the zoom level, the more details are shown and vice versa.

Is at least one alarm persistent, the field with the zone name/-number is marked **red** (see chapter ↗Alarm presentation Zone view). In the Zone view are located the following

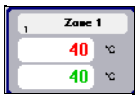
at highest zoom level

- zone name and zone number (as footnote down left) in the top field
- Actual value °C 0) alternating with information display (**blue**) (see chapter ↗Status/Alarms and Information displays)
- Setpoint value °C 0)
- Output value % 2)
- Heating current A 1)
- Bar chart with the regulation difference 2)



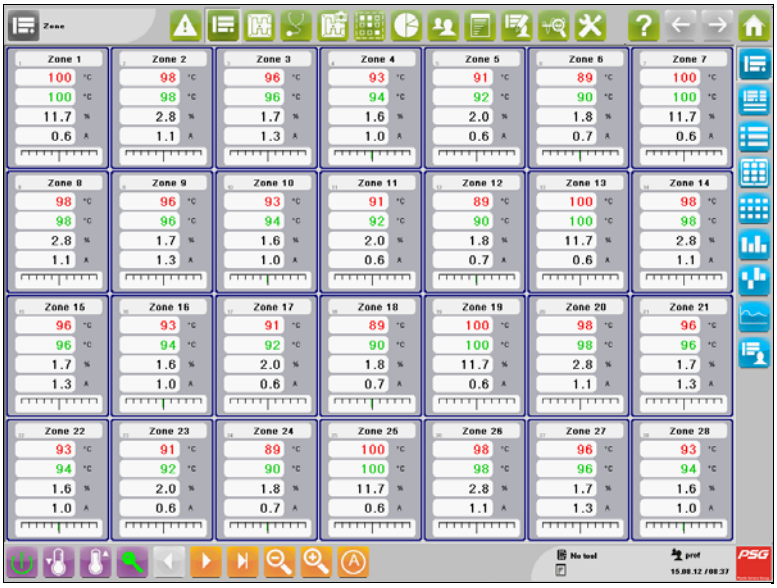
at smallest zoom level

- zone name and zone number (as footnote down left) in the top field
- Actual value °C 0) alternating with information display (**blue**) (see chapter ↗Status/Alarms and Information displays)
- Setpoint value °C 0)



0) dependent on ↗Temperature unit °C/°F

1), 2) only for higher zoom levels visible



Navigation keys	
Change zoom level	Scroll back-wards; Scroll for-wards; Go to; Zoom out; Zoom in
(see chapter ↗Views)	

3.2 Detail view

In the Detail view only one zone is displayed. One can scroll between the zones by the navigation keys (see below).

The following information is shown in the Detail view

- zone name and zone number (as footnote down left) in the top field
- Actual value, alternating with information display (**blue**) (see chapter ↗Status/Alarms and Information displays)
- Setpoint
- Output value
- Heating current
- A bar graph with the regulation difference

Status/Alarms

The current status is shown as text. Persistent alarms result in a color change in the dedicated fields (see chapter ↗Alarm presentation Detail view).

Parameters

The necessary parameters for description of the zones are listed (see document Hot Runner Controller Parameters).

Temperature trend display

All seconds, the trend is displayed for a period of 10 minutes (setpoint value [**green**] and actual value [**red**]). The y-axis is scaled dependent on the setpoint value/actual value.

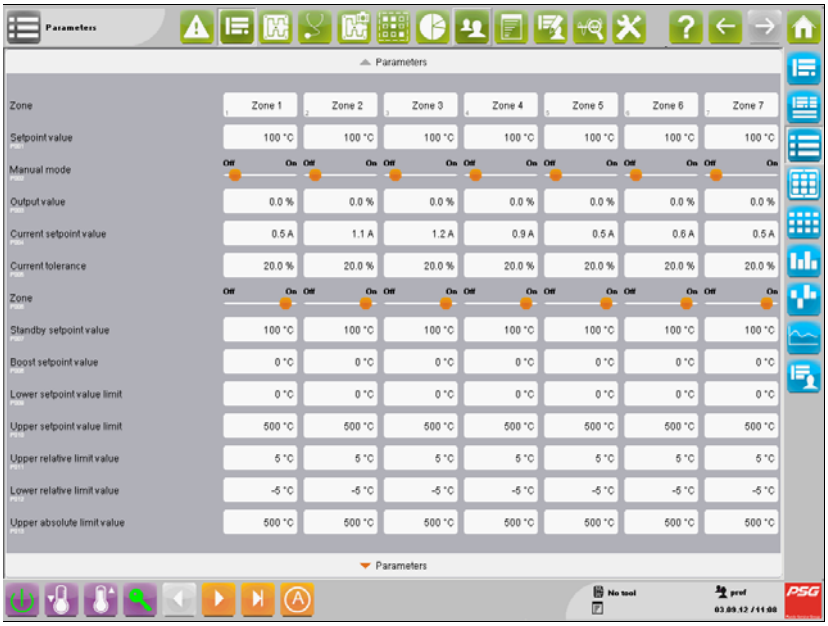
↗Zone selection

By the zone selection, zones can be selected and combined, where, for example the setpoint value or a parameter should be changed simultaneously.

Navigation keys (see chapter ↗Views)								
See Chapter↗Zone selection	Scroll backwards	Scroll forwards	Go to		All	None	First/Last	Group

3.3 Parameter view

In the parameter view are all parameters (The visible and therefore operable parameters for the user are assigned by ↗User Administration) of all zones are visible. One can scroll between the zones and the parameters by the navigation keys (see below).



Navigation keys (see chapter ↗Views)	Scroll back-wards	Scroll for-wards	Go to	Parameter Scroll parameter up	Parameter Scroll parameter down

3.4 Single parameter view

In the single parameter view only one parameter (the visible and therefore operable parameters for the user are assigned by ↗User Administration) for at least 100 zones is visible. One can scroll between the zones and other parameters by the navigation keys (see below).

Navigation keys (see chapter ↗Views)

Scroll backwards | Scroll forwards | Go to

Scroll parameter up

Scroll parameter down

3.5 All view

In the All view one achieves a general overview of the control performance of the temperature control of the hot runner (with regulation difference).

In this view all zones are represented on a screen page with a clear and easily visible Good/Bad information item in the form of a color underlay of the zone.

Color of the zone		Zone lies within the tolerance range around the setpoint value.
		The actual value lies below the adjusted temperature limit value.
		The actual value is higher than the adjusted upper temperature limit value.
		Zone is passive/off.

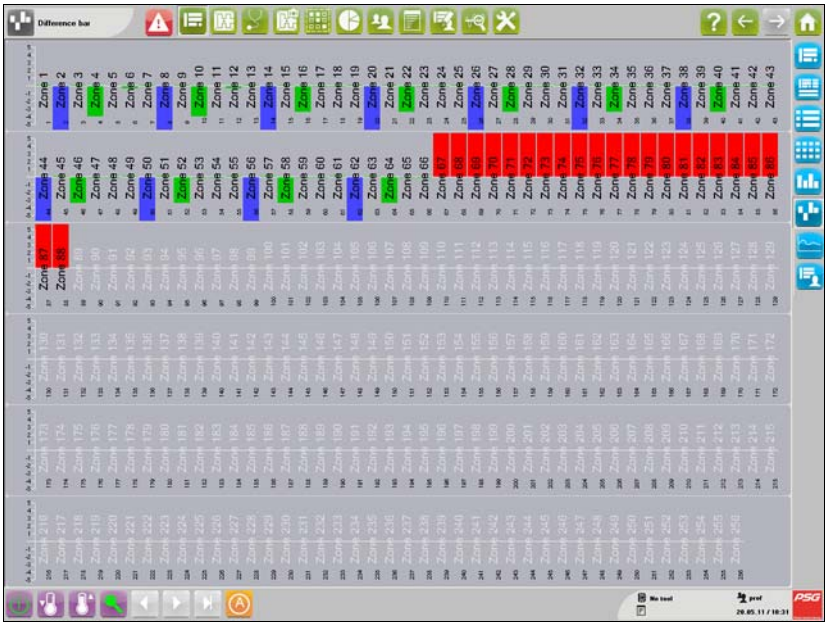
3.6 Bar chart view

In the bar chart view, the actual value (green) and the setpoint value (red) are represented for all zones.

Color of the bar chart		Actual value
		Setpoint value
		Zone is passive/off.

3.7 Difference bar chart view

In the difference bar chart view, the deviation of the actual value is represented with reference to the setpoint value
for all zones.



Color of the bar chart		Deviation -5 K to +5 K
		Deviation < -5 K from the setpoint value
		Deviation > +5 K from the setpoint value
		Zone is passive/off.

Change setting	See Chapter↗TEMPSoft2 Setting - Views ↗Scaling difference bar

3.8 Trend view

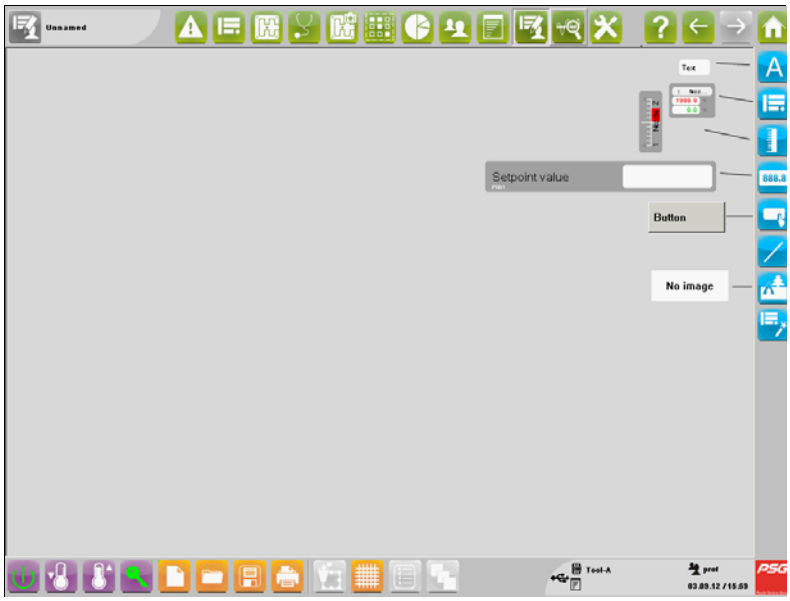
In the trend view, the actual value, the setpoint value and the output value are displayed for maximum 16 selectable zones.

For details see chapter ↗Trend.

3.9 User defined view

The user created user defined views are displayed. One can scroll between the user defined views by the navigation keys.

Details on creation see tool management chapter ↗View and chapter ↗View

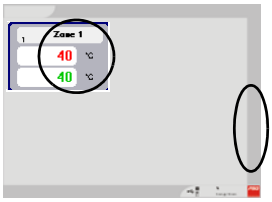


Example that shows, which picture elements are available for creating a user defined view.

Are user defined views available, they must be enabled for the user by ↗User Administration.

Navigation keys (see chapter ↗Views)	Scroll back-wards; Scroll for-wards; Go to

4 Zone selection



By selection of a zone (see ↗TEMPSoft2 Setting - Program settings ↗Direct entry)

and/or

by selection of a key for the zone selection

TEMPSoft2 has several methods to select zones quickly and effectively.

The selection/deselection of zones is done by

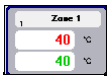
- ↗DIRECT zone selection
- ↗Zone selection ALL
- ↗Zone selection NONE
- ↗Zone selection SINGLE
- ↗BLOCK zone selection
- ↗Zone selection FIRST/LAST
- ↗Zone selection predefined GROUP

The different selection methods can be combined in any order.

By the zone selection, zones can be selected and combined, where, for example the setpoint value or a parameter should be changed simultaneously.

Navigation keys (see chapter ↗Zone selection)	Scroll back-wards	Scroll for-wards	Go to

4.1 DIRECT zone selection

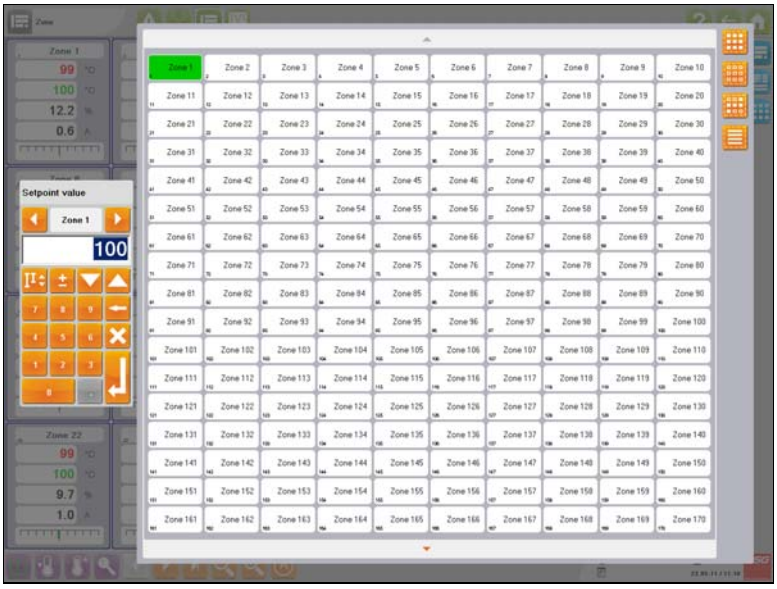


Selection

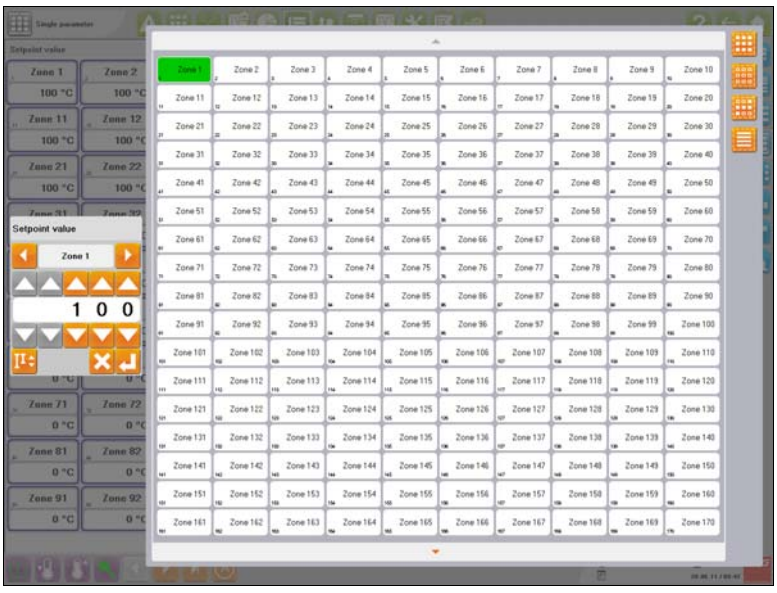
- of a zone in the Zone view
- of a parameter in the Parameter view
- of a zone in the Single Parameter view
- of a zone in the All view

The selection of zone 1 is done in different views (prerequisite see chapter ↗TEMPSoft2 Setting - Program settings ↗Direct entry = ON)

Prerequisite see chapter ↗TEMPSoft2 Setting - Views ↗Zone Selection = Text



In the present example, the **Zone view** is displayed and zone 1 is selected and visible.
(See chapter ↗TEMPSoft2 Setting - Program settings ↗Input Mode = Calculator)



In the present example, the **Single Parameter view** is displayed and zone 1 is selected and visible.
(See chapter ↗TEMPSoft2 Setting - Program settings ↗Input Mode = Decade switch)

For the **Parameter view** and the **All view** the ↗DIRECT zone selection looks identical.

In the open window beside the calculator and/or decade switch (left, see chapter ↗TEMPSoft2 Setting - Program settings ↗Input Mode) the zone selection field is shown. The zones are selected in the zone selection field, like described in the following chapters. Change of parameters see chapter ↗Standard Operation

Press corresponding key for zone selection.

↗Zone selection ALL

↗Zone selection NONE

S ingle ↗Zone selection SINGLE

Block ↗BLOCK zone selection

↗Zone selection FIRST/LAST

↗Zone selection predefined GROUP

4.2 Zone selection ALL

=

Key zone selection ALL

In the present example, the Detail view is displayed and zone 1 is selected and visible.

Press key

All zones are selected (see zone selection field)

4.3 Zone selection NONE

=

Key zone selection NONE

In the present example, the Detail view is displayed and zone 1 is visible and further zones are selected.

Press key

All zones are deselected (see zone selection field)

4.4 Zone selection SINGLE

In the present example, the Detail view is displayed and zone 1 is selected and visible.

Press keys 7, 8, 14, 20 in the zone selection field.

The above-named zones are individually selected additional to zone 1.

4.5 BLOCK zone selection

In the zone selection field the Block zone selection is available (see chapter ↗DIRECT zone selection).

In the present example, the Detail view is displayed and zone 1 is selected and visible.

Press zone selection key of the first zone (here key 4) in the zone selection field.

Double click on the last zone of the block (here key 16).

All zones in between the first (zone 4) and the last (zone 16) selected zone are shown as selected.

The above-named zones are en-block selected additional to zone 1.

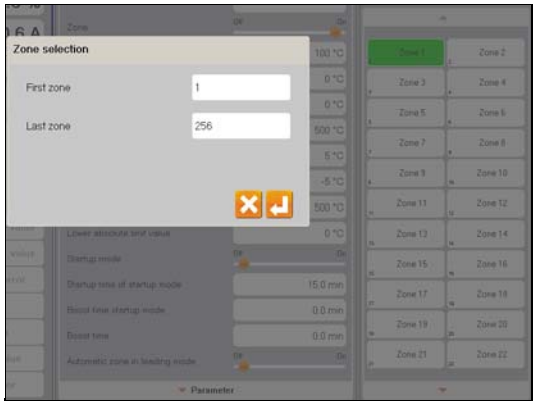
4.6 Zone selection FIRST/LAST

=

Key zone selection FIRST/LAST

In the present example, the Detail view is displayed and zone 1 is selected and visible. (See chapter ↗TEMPSoft2 Setting - Program settings ↗Input Mode = Decade switch)

Press key



Dialog box opens

Zone selection first and last zone

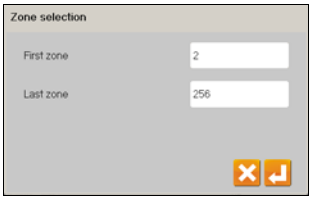
Select numerical box FIRST ZONE

Input box opens

Change numerical values by up/down key

Set numerical value to 2

Confirm



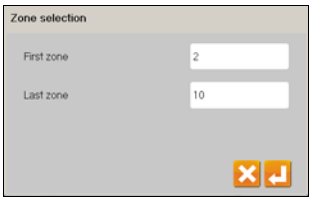
Select numerical box LAST ZONE

Input box opens

Change numerical values by up/down key

Set numerical value to 10

Confirm



Close dialog

The zones 1 to 10 are selected and zone 1 displayed and visible.

4.7 Zone selection predefined GROUP

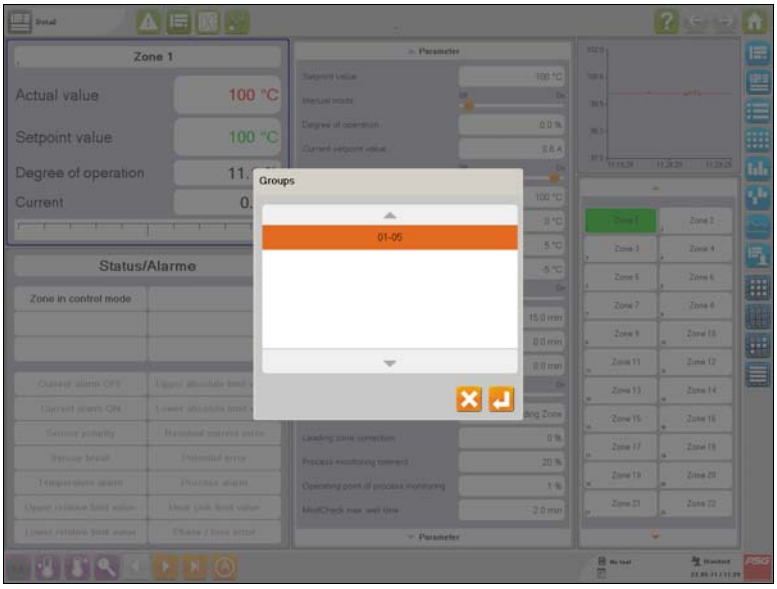
=

Key zone selection GROUP

In the present example, the Detail view is displayed and zone 1 is selected and visible.

Press key

Is the definition of the group still missing, the key is GRAY (deactive).



Dialog box opens

Selection of the predefined group 01 - 05

Confirm

The zones, defined by the selected group, are displayed as selected.

The zones, defined by the group, are selected. An existing selection is canceled by this.

5 Standard Operation

5.1 Set parameters

All parameters of a zone, that are visible and therefore operable for the user (see chapter ↗User Administration) are shown in

- Detail view
- Parameter view
- Single parameter view

zu sehen.

Is the DIRECT zone selection used in the All view and/or Zone view (see chapter ↗TEMPSoft2 Setting - Program settings ↗Direct entry), only the parameters

- setpoint value, when zone is in control mode
- output value, when zone is in manual mode

are available.

The parameters could be selected and changed. The entry is done

- ↗By numerical box of decade switch
- ↗By numerical box of calculator
- ↗By sliding switch
- ↗By list of value
- ↗By marking of characteristics

for the parameters.

Are more parameters available, than shown, the arrow symbol next to the word Parameter is marked in **orange**. It can be scrolled by this arrow symbol.

The procedure to set the system parameters is identical.

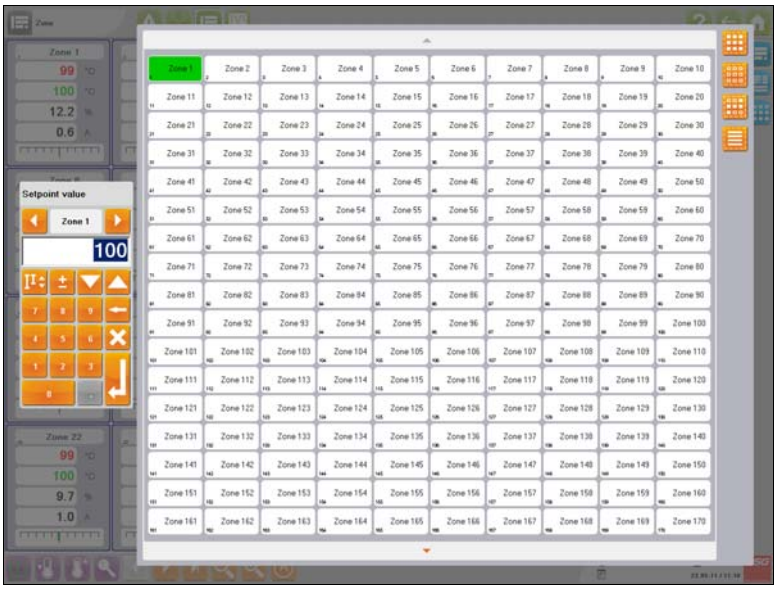
Navigation keys (see chapter ↗Views)						
	Scroll back-wards	Scroll for-wards	Go to	Scroll parameter up	Scroll parameter down	

Either ...

DIRECT zone selection (see chapter ↗DIRECT zone selection)

Selection

- of a zone in the Zone view
- of a zone in the All view
- of a parameter in the Parameter view
- of a parameter in the Single parameter view



In the present example, the Zone view is displayed and zone 1 is selected and visible.

For DIRECT zone selection in the All view and/or Zone view, only the setpoint value (when zone in control mode) or the output value (when zone in manual mode) cab be changed.

All parameters can be changed by DIRECT zone selection in Parameter and/or Single Parameter view.

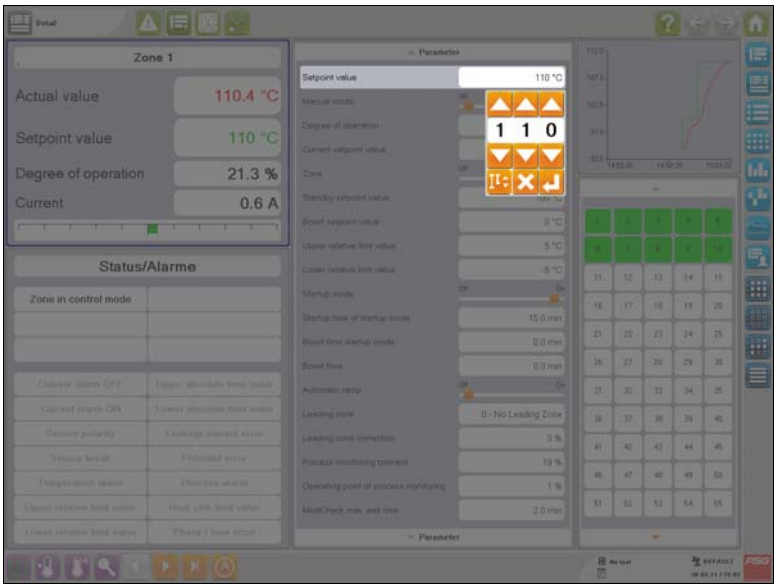
... Or

Show Detail view

Press key

In the present example, the Detail view is displayed and zone 1 is selected and visible.

By numerical box of decade switch



By selection of the numerical box of the parameter (here: setpoint value), the parameter can be set for the selected zones (here: 1-10).

Prerequisite see chapter ↗TEMPSoft2 Setting - Program settings ↗Input Mode = Decade switch.
Procedure to select zones see chapter ↗Zone selection.

Change numerical values by up/down key

Absolute/Relative;
Confirm or reject

By numerical box of calculator

By selection of the numerical box of the parameter (here: setpoint value), the parameter can be set for the selected zones (here: 1-10).

Prerequisite see chapter ↗TEMPSoft2 Setting - Program settings ↗Input Mode = Calculator.
Procedure to select zones see chapter ↗Zone selection.

Change numerical values by up/down key

Confirm or reject

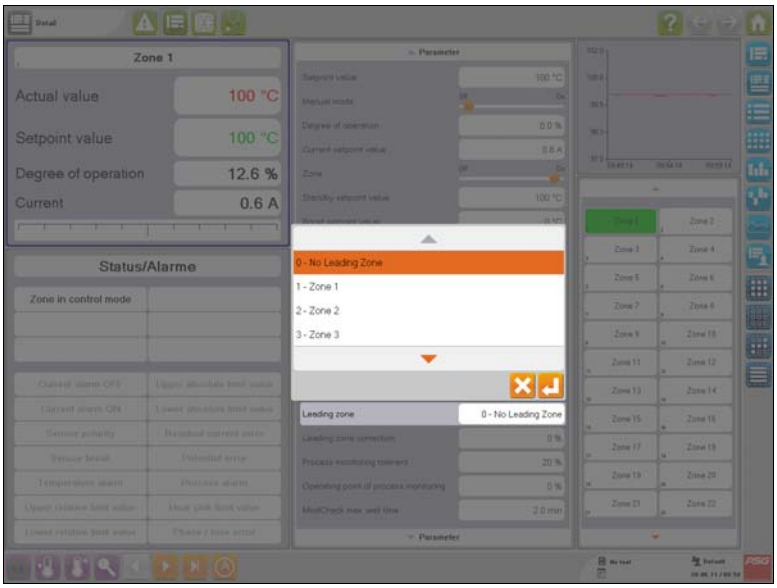
Absolute; Relative; Prefix; Delete

By sliding switch

By moving the sliding switch from OFF to ON (here: manual mode), the parameter can be set for the selected zones (here: 1-10).

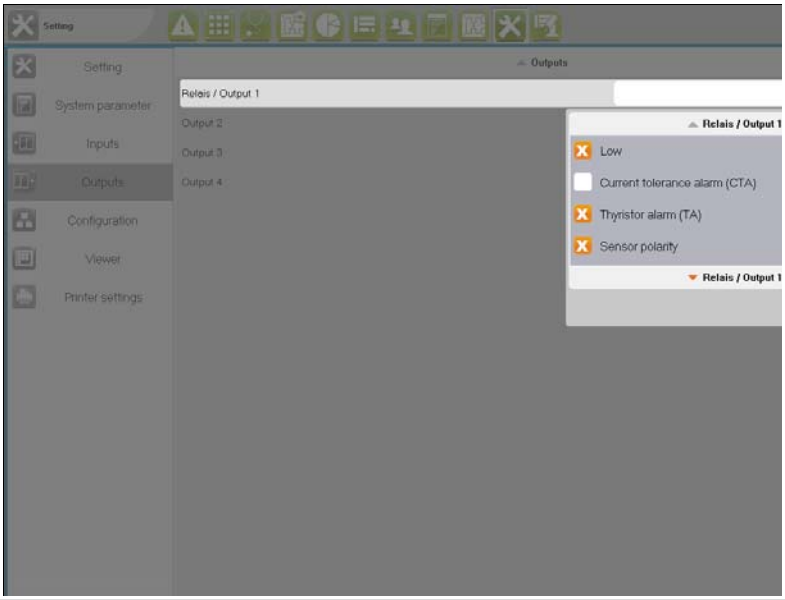
Procedure to select zones see chapter ↗Zone selection.

By list of value



By selection of the list of value of the parameter (here: leading zone), the parameter can be set for the selected zones (here: 1).

By marking of characteristics



By selection of the field of the parameter (here: relay / output 1), characteristics can be added from the list of value by marking, and deactivated by deleting the cross.

Select the cross, to delete it.

Select the empty field, to set a cross.

5.2 Set Setpoint Value

Should the setpoint value be changed for one or more zones, the Detail view has to be displayed.

Or...
by ↗DIRECT zone selectionand ↗Set parameters

Navigation keys
(see chapter ↗Views)

See Chapter↗Zone selection

Scroll back-wards | Scroll for-wards | Go to | All | None | First/Last | Group

Set Setpoint Value

Press key

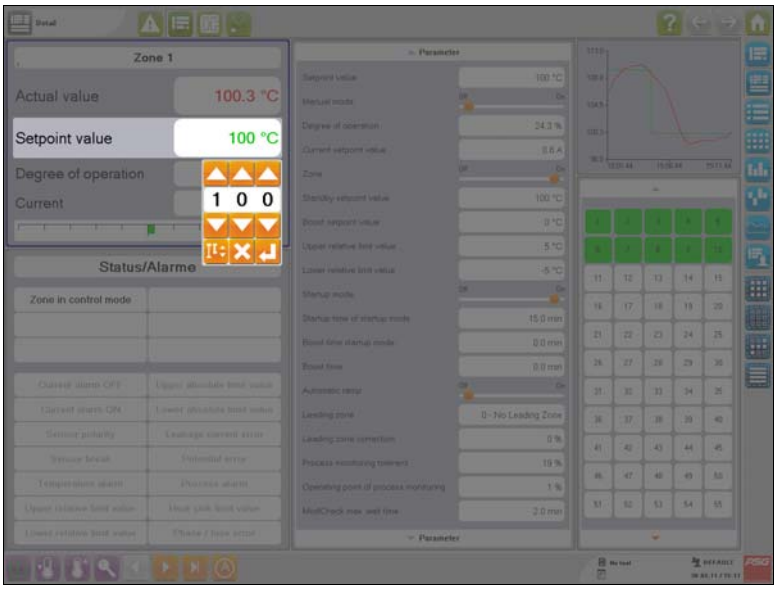
In the present example, the Detail view is displayed and zone 1 is selected and visible.

For the zones 1-10 the setpoint value is set from 100 °C to 110 °C.

The zones 1-10 are selected.

Procedure to select zones see chapter ↗Zone selection.

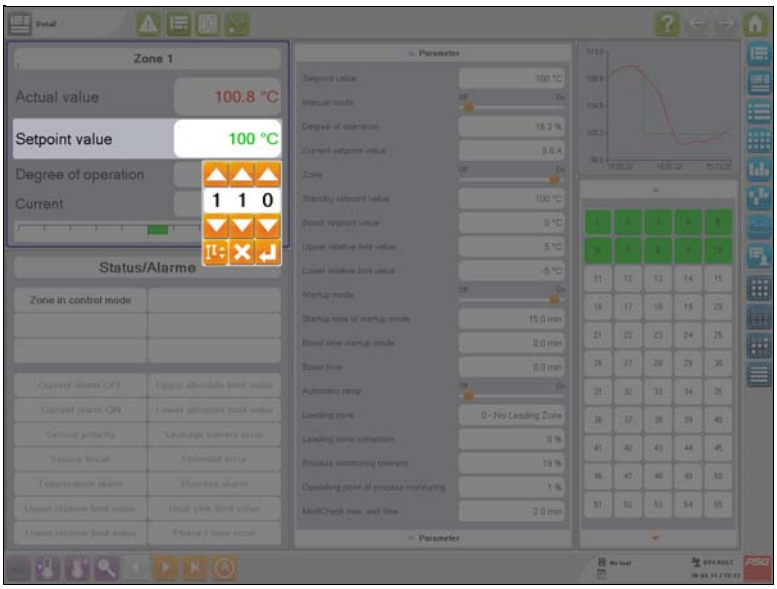
The following examples are based on see chapter ↗TEMPSoft2 Setting - Program settings ↗Input Mode = Decade switch



Select numerical box setpoint value

Input box opens

Change numerical values by up/down key

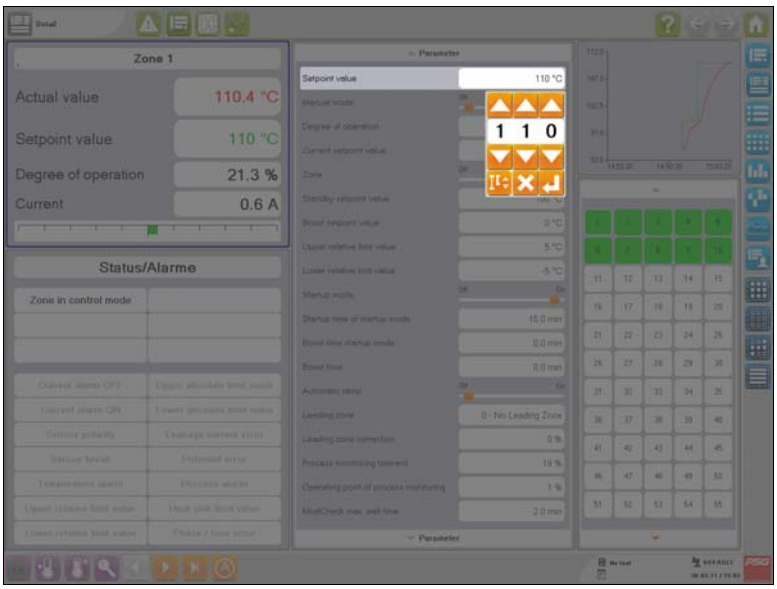


Set numerical value to 110

Confirm

As long as the actual value is adjusted the specified setpoint value,

- the bar chart shows a regulation difference
- the alarms signalize a limit value violation
- a setpoint value jump is shown in the temperature trend display



The setpoint value can be change by selection of the numerical box of the parameter setpoint value.

Further proceed as previously described, see ✱.

5.3 Output value

Description 	A temperature control with temperature sensor, temperature controller and heating element is possible only in case of closed control system. In case of failure of the temperature sensor, it is not possible to control the process temperature. In case of older tools without temperature detectors in the control system, the operation of the control zone is possible only in manual mode or in leading zone mode.
How it works	With manual mode, the operator can adjust the required heating capacity in percent as an output value. In case of the output value a value is involved between 0 and 100, which represents the percentage content for the switched-on control output (0% = completely switched off; 100% = continuously switched on). If a sensor defect occurs during standard operating mode, then the temperature control notes the average output value at last output in the regulation. In case of selection of manual mode, the temperature controller proposes this output value in manual mode.
What good is it	The setting of the output value in manual mode guarantees primarily operating reliability and prevents production downtimes.

Change setting	profiTEMP	TEMP-Command
	|pT[P002] Manual mode|	|TC[P003] Manual mode|
	|pT[P003] Output value|	|TC[P002] Degree of Operation|
	See parameter description of the corresponding hot runner controller	

5.3.1 Change output value

Should the output value be changed for one or more zones, the Detail view has to be displayed and the zone(s) have to be set to ↗Manual mode.

Or...
by ↗DIRECT zone selectionand ↗Set parameters only, when zone in manual mode.

Navigation keys
(see chapter ↗Views)

See Chapter↗Zone selection

Scroll back-wards | Scroll for-wards | Go to | All | None | First/Last | Group

Change output value

Press key

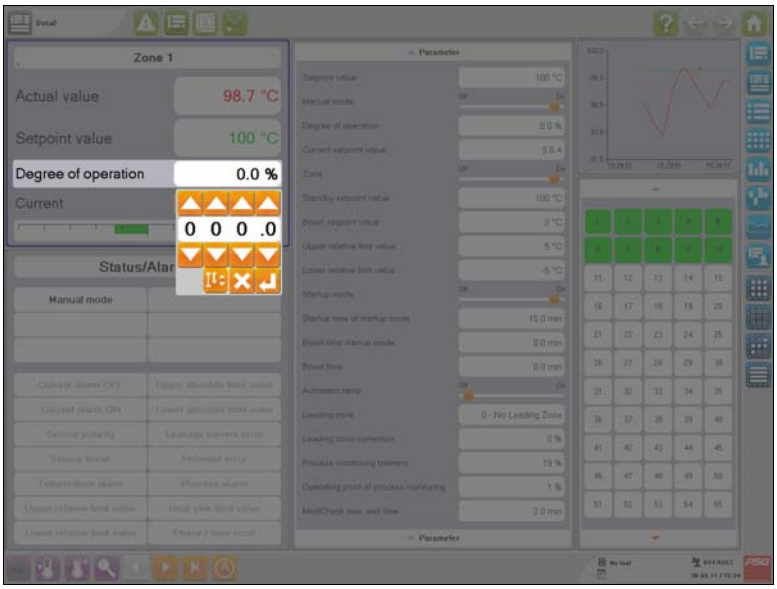
In the present example, the Detail view is displayed and zone 1 is selected and visible.

For the zones 1-10 (see status ↗Manual mode) the output value is set to 1.0.

The zones 1-10 are selected.

Procedure to select zones see chapter ↗Zone selection.

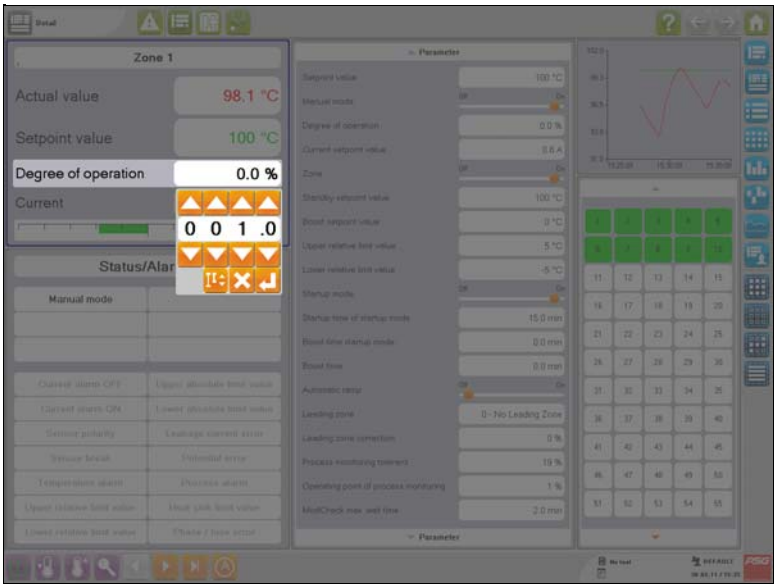
The following examples are based on see chapter ↗TEMPSoft2 Setting - Program settings ↗Input Mode = Decade switch



Select numerical box output value

Input box opens

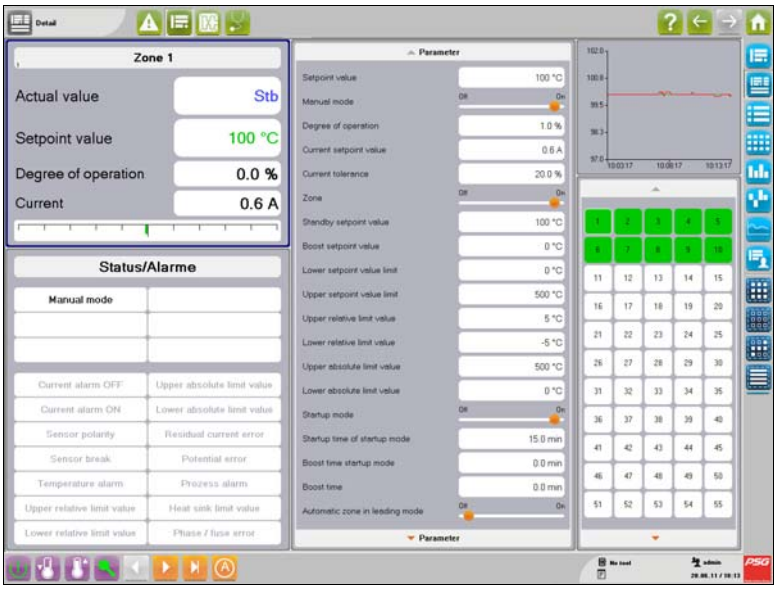
Change numerical values by up/down key



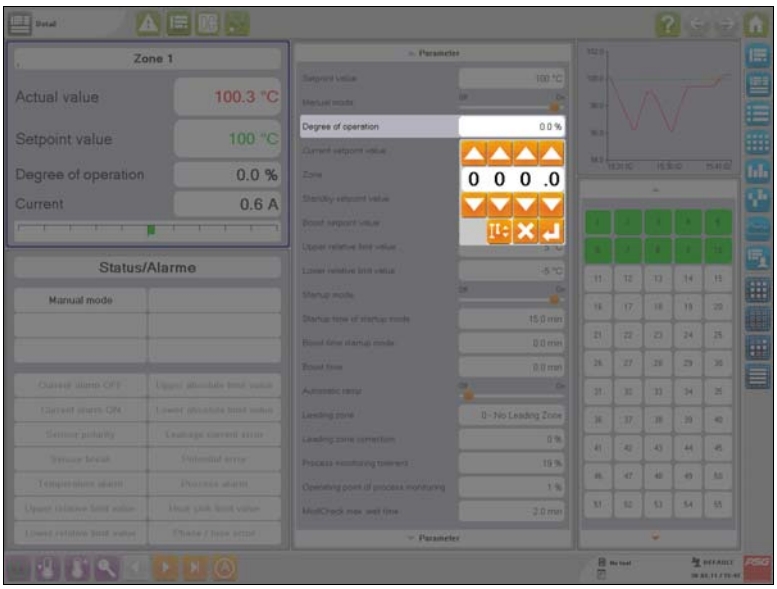
Set numerical value to 1.0

Confirm

The manual mode can be activated too, when changing the output value.



The output value is set to 1.0.



The output value can be change by selection of the numerical box of the parameter output value.

Further proceed as previously described, see ✱.

5.4 Manual mode

Description 	A temperature control with temperature sensor, temperature controller and heating element is possible only in case of closed control system. In case of failure of the temperature sensor, it is not possible to control the process temperature. In case of older tools without temperature detectors in the control system, the operation of the control zone is possible only in manual mode or in leading zone mode.
How it works	With manual mode, the operator can adjust the required heating capacity in percent as an output value. In case of the output value a value is involved between 0 and 100, which represents the percentage content for the switched-on control output (0% = completely switched off; 100% = continuously switched on). If a sensor defect occurs during standard operating mode, then the temperature control notes the average output value at last output in the regulation. In case of selection of manual mode, the temperature controller proposes this output value in manual mode.
What good is it	The function guarantees primarily operating reliability and prevents production downtimes.

Change setting	profiTEMP	TEMP-Command
	|pT[P002] Manual mode|	|TC[P003] Manual mode|
	|pT[P003] Output value|	|TC[P002] Degree of Operation|
	See parameter description of the corresponding hot runner controller	

5.4.1 Switch manual mode ON/OFF

Should the manual mode be switched on/off for one or more zones, the Detail view has to be displayed.

Navigation keys (see chapter ↗Views)							
See Chapter↗Zone selection	Scroll back-wards	Scroll for-wards	Go to	All	None	First/Last	Group

Switch on manual mode

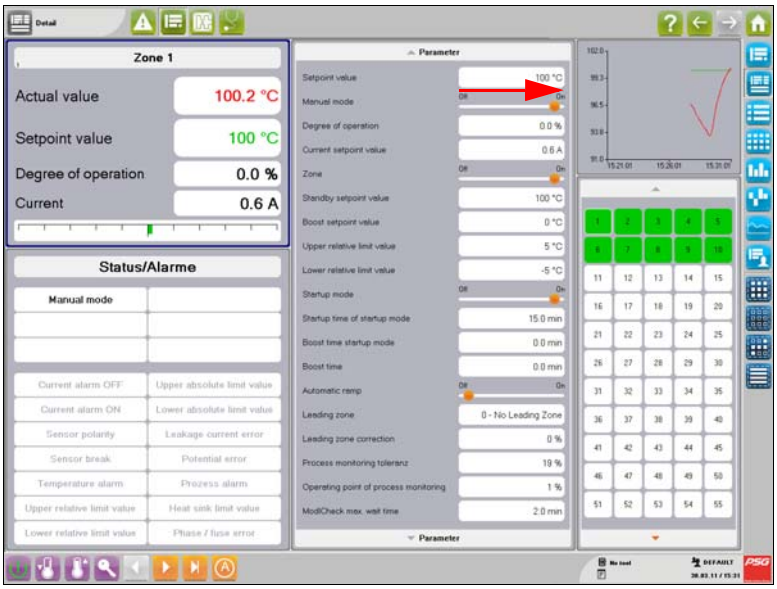
Press key

In the present example, the Detail view is displayed and zone 1 is selected and visible.

For the zones 1-10 the manual mode should be switched on.

The zones 1-10 are selected.

Procedure to select zones see chapter ↗Zone selection.



The manual mode is switched on by moving the sliding switch from OFF to ON for the parameter manual mode.

In the status MANUAL MODE is displayed.

Set output value see ↗Output value

5.5 Current display and execute current transfer

Activate current transfer

In the Zone view, the zones are represented with their important characteristics dependent on the zoom level. In the higher zoom levels the heating current/actual current value is shown with unit A.

In the Detail view the heating current/current is shown.

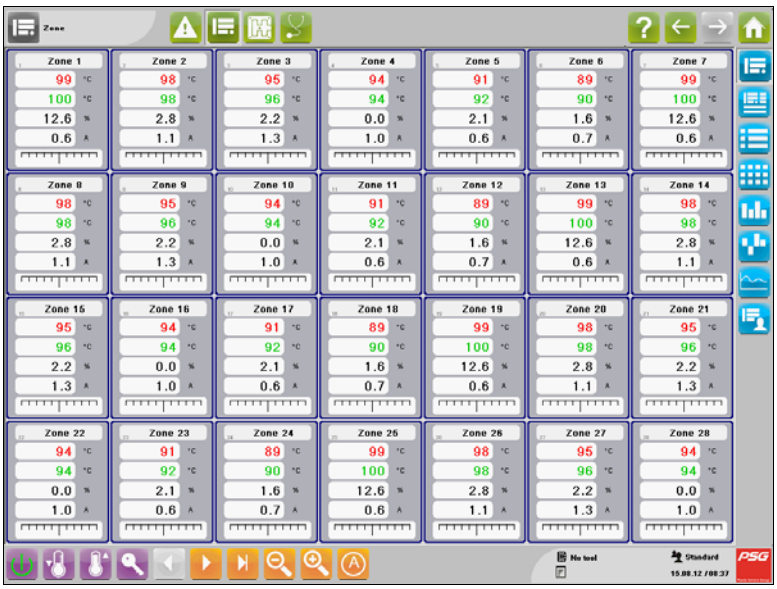
Navigation keys (see chapter ↗Views)

See Chapter↗Zone selection

Scroll backwards | Scroll forwards | Go to | Zoom out | Zoom in | Current transfer

5.5.1 Activate current transfer

To monitor the floating current in the heater by comparison with reference values, the current setpoint value must be set automatically by current transfer and/or manually.
The current transfer can be activated in all views by the same key.

Show any view	See Chapter↗Views
	In the present example the zone view is displayed
	In the present example, the Zone view is displayed and by changing the zoom level the zones 1-28 are visible.
Activate current transfer	Press key
	Confirm
See Chapter↗Heizstrommessung und Überwachung	

5.5.2 Specify current setpoint value manually

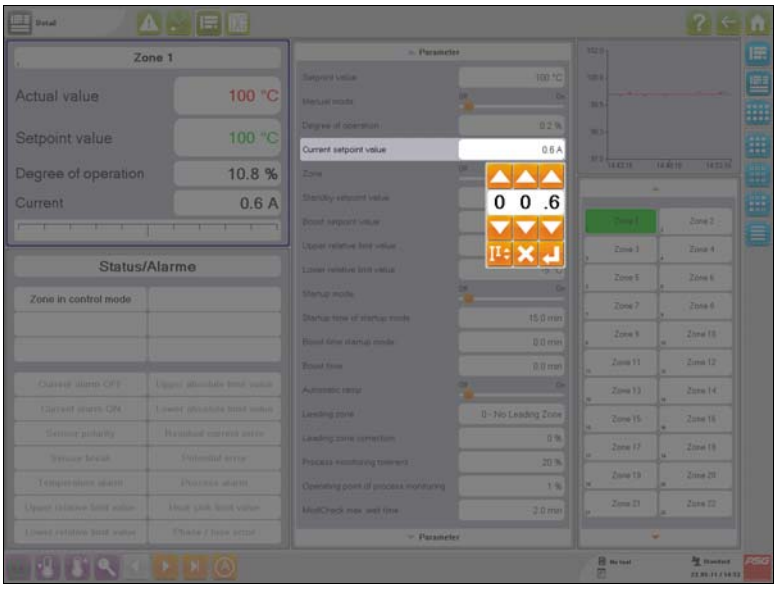
The current setpoint values can be changed after current transfer and/or be set manually for each zone.

Press key

In the present example, the Detail view is displayed and zone 1 is selected and visible.

For the zone 1 the current setpoint value is set to 0.7.

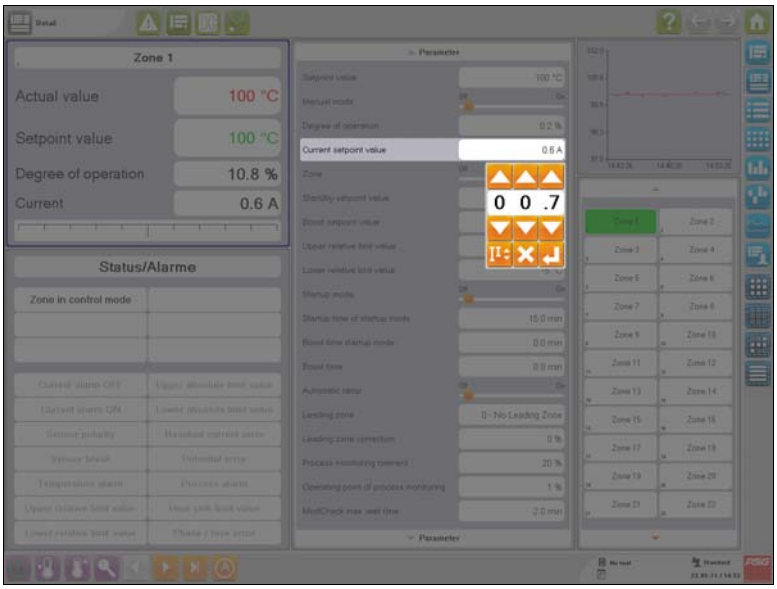
The following examples are based on see chapter ↗TEMPSoft2 Setting - Program settings ↗Input Mode = Decade switch



Select numerical box current setpoint value

Input box opens

Change numerical values by up/down key



Set numerical value to 0.7

Confirm

The current setpoint value is set to 0.7

See Chapter↗Heizstrommessung und Überwachung

6 Main keys

Main keys

The following main keys are available in **TEMPSoft2** for the hot runner controller

- ↗Heating, the heaters/heating on the control outputs are switched on/off
- ↗Standby, the setpoint values are reduced
- ↗Boost, the setpoint values are increased
- ↗Login/Logout, other users are activated after login and/or deactivated after logout

Change setting	The visible and therefore operable main keys for the user are assigned by ↗User Administration.

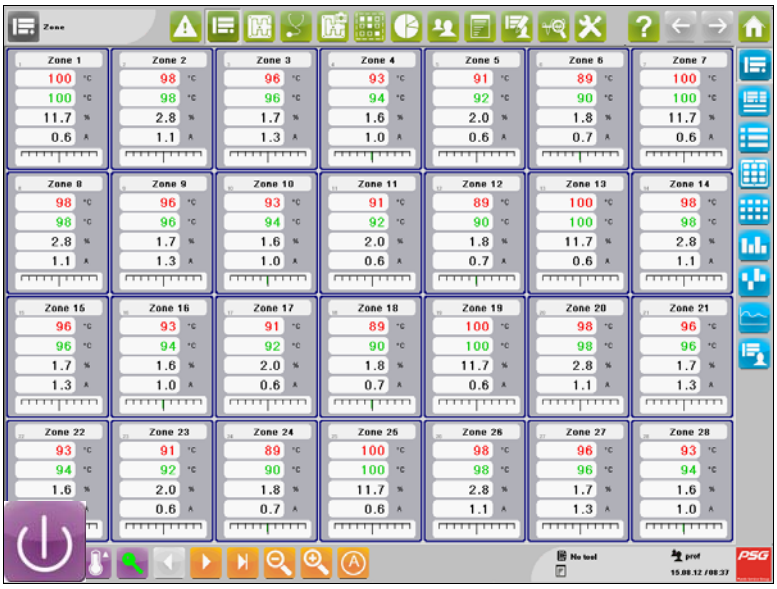
6.1 Heating

/

Is the function active, the color of the symbol on the key changes to **green**.

Key HEATING

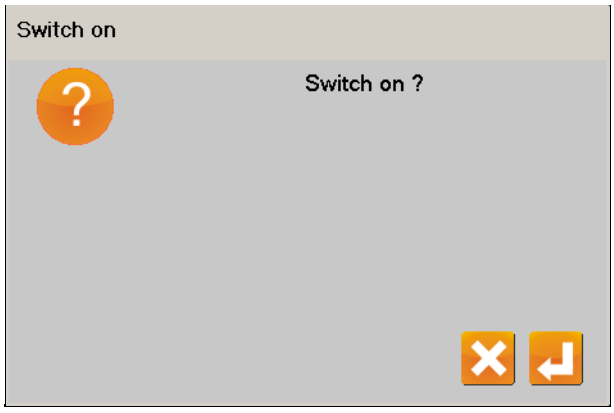
6.1.1 Switch-on heating



Switch-on heating

Press key

After switch-on of the hot runner controller and/or after activation of the heating a dialog box can be shown. Details see ↗Query for MoldCheck start.

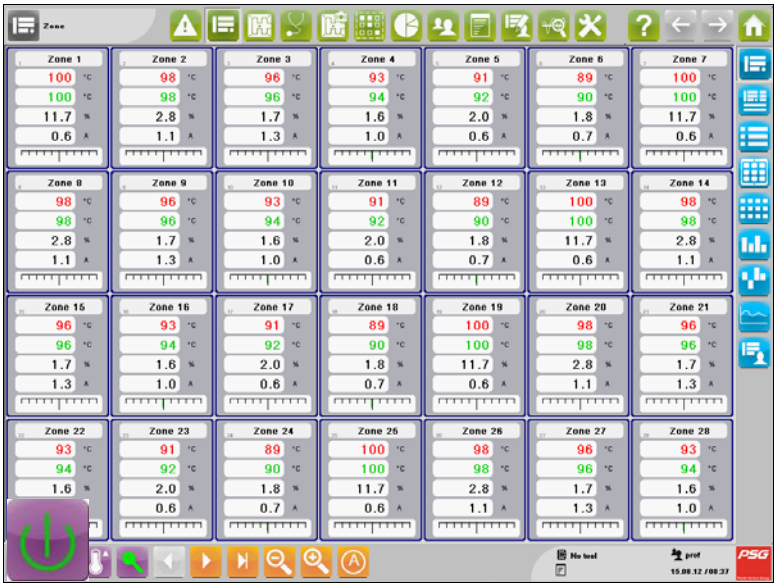


The heating is switched on for all zones by the key.

Confirm

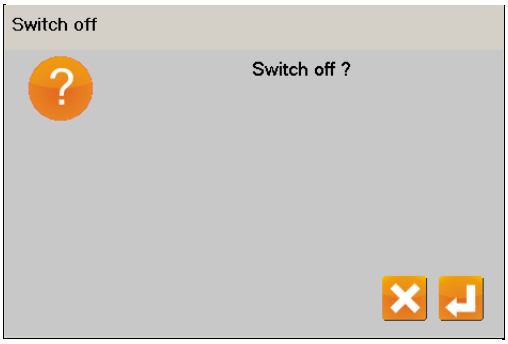
Heating is switched on, the symbol of the key is **green**.

6.1.2 Switch-off heating



Switching-off heating

Press key



The heating for all zones is deactivated by key.

Confirm

Heating is switched off, the symbol of the key is white.

After a successful identification, it is not restarted after switch off/on of HEATING, when

- the start conditions for the identification are fulfilled
- in between the setpoint value was not set to „0“
- the actual value shows sensor break.

Please note that in case of deactivation over the HEATING key, the power outputs of the heating are not disconnected from mains voltage. This means that, in case of a defect of the SSR power controller, a deactivation of the zone over the HEATING off key does not suffice, and it must be guaranteed in addition that the heating circuit is interrupted, e.g. through removal of the fuse protection of the corresponding zone.

Important reference!

6.2 Standby

/

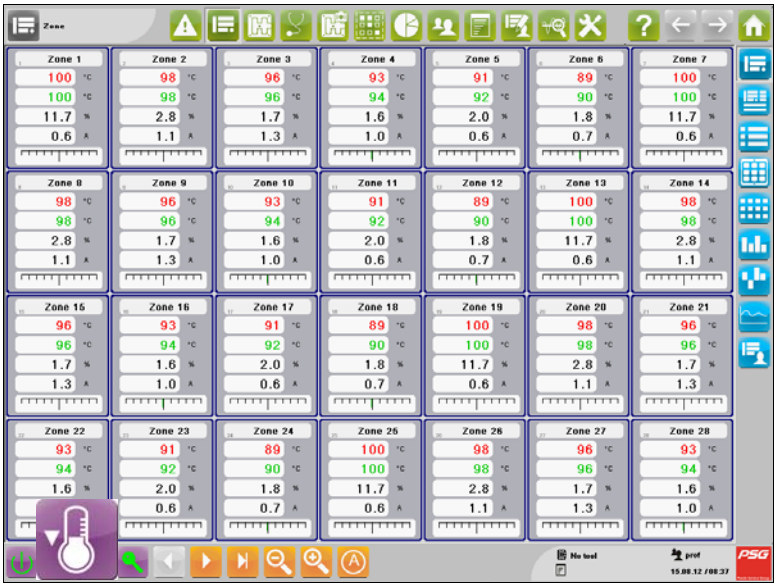
Is the function active, the color of the symbol on the key changes to **green**.

Key STANDBY

Description	In Standby mode the setpoint values are reduced, because e.g. in production breaks it makes sense, to reduce the temperature level of the hot runner.
How it works	At operation the Standby mode is started and ended at the push of the key. The set-point values of the zones are reduced by a freely selectable temperature value. Alternatively the function can also be activated by a digital input e.g. from the injection molding machine.
What good is it	Energy is saved and the plastic, located in the cavities, is not thermally damaged.

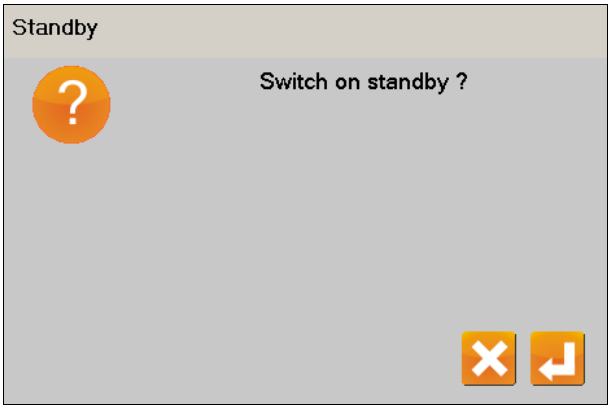
Change setting		profiTEMP	TEMP-Command
		|pT[SP09] Standby|	|TC[SP09] / [SP10] Function System Input 1 / 2|
		|pT[SP11] Auto standby time|	n.a.
	a	|pT[P007] Standby setpoint|	|TC[P009] 2.Setpoint/2.Lowering Value|
		See parameter description of the corresponding hot runner controller	

6.2.1 Switch-on Standby



Switch-on Standby

Press key

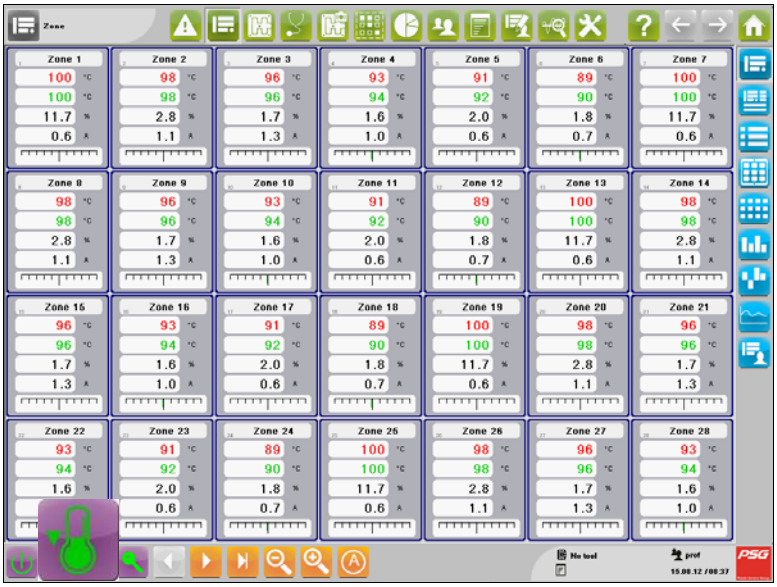


After activation of the Standby, all zones are reduced by the setpoint value under parameter (a).

Confirm

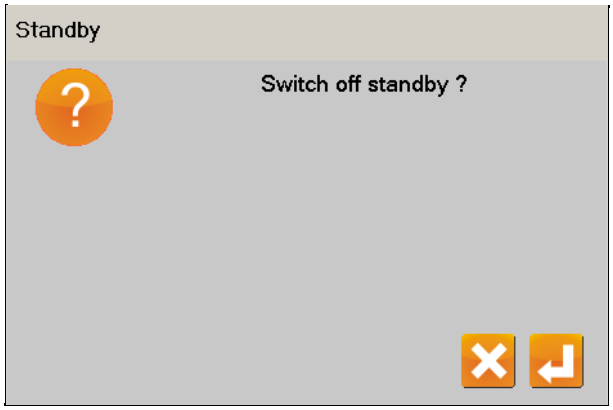
Standby is switched on, the symbol of the key is **green**.

6.2.2 Switch-off Standby



Switch-off Standby

Press key



Standby for all zones is deactivated by key.

After deactivation of the Standby, all zones are controlled by the setpoint value set.

Confirm

Standby is switched off, the symbol of the key is white.

6.3 Boost

/

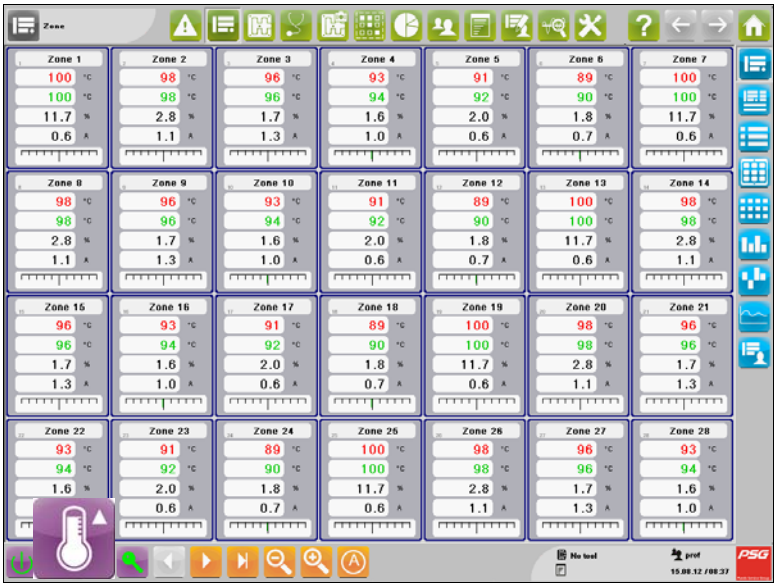
Is the function active, the color of the symbol on the key changes to **green**.

Key BOOST

Description	In Boost mode, the setpoint values are increased e.g. to heat nozzles for a short time after downtimes and to guarantee a smooth production start.
How it works	The Boost mode can be used in two situations. In the first case the Boost mode is started during operation at the push of the key. The setpoint values of the zones are increased by a freely selectable temperature value. Additionally a time period can be set, after which the Boost mode is automatically ended, otherwise the Boost mode is ended per push of the key. Alternatively the function can also be activated by a digital input e.g. from the injection molding machine. In the second case the Boost mode follows the heating-up. After the start-up time has elapsed, the zones are increased by a freely selectable temperature value. This workflow provides the operator at automated heating-up processes, because no manual interaction is necessary.
What good is it	The Boost mode provides the operator at start-up and production start and is labor-saving.

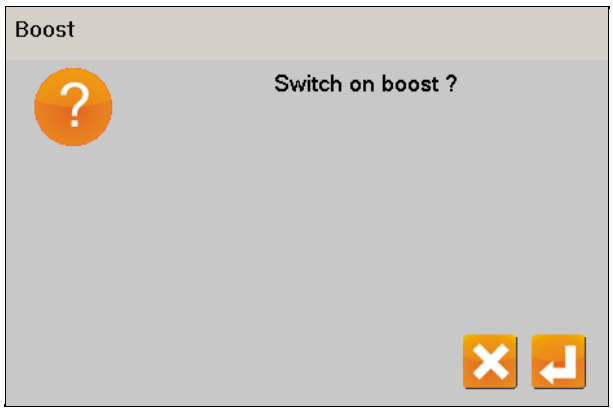
Change setting		profiTEMP	TEMP-Command
		|pT[SP08] Boost|	|TC[SP09] / [SP10] Function System Input 1 / 2|
	a	|pT[P008] Boost setpoint|	|TC[P010] 3.Setpoint/3.Lowering Value|
		|pT[P017] Boost time at start-up mode|	|TC[P094] Timer 4|
	b	|pT[P018] Boost time|	|TC[P088] Timer 2|
		See parameter description of the corresponding hot runner controller	

6.3.1 Switch-on Boost



Switch-on Boost

Press key

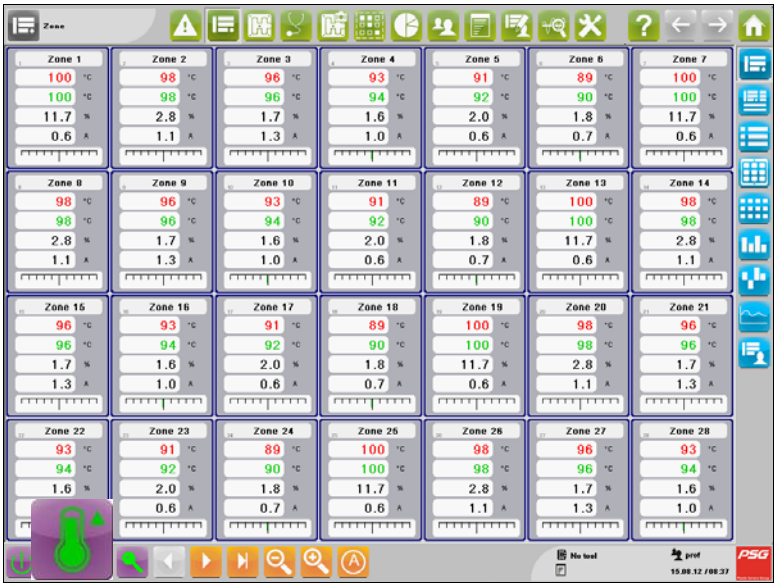


After activation of the Boost function, all zones are increased by the setpoint value under parameter (a) for the time set under parameter (b).

Confirm

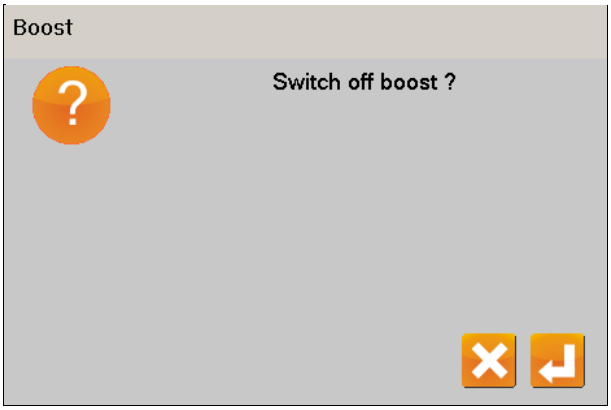
Boost is switched on, the symbol of the key is **green**.

6.3.2 Switch-off Boost



Switch-off Boost

Press key



Boost for all zones is deactivated by key.

After deactivation of the Boost function and/or after timer elapsed, all zones are controlled by the setpoint value set.

Confirm

Boost is switched off, the symbol of the key is white.

6.4 Login/Logout

/

Is the function active, the color of the symbol on the key changes to **green**.

Key LOGIN/LOGOUT

Unauthorized input on the hot runner controller is prevented by a comfortable user administration in **TEMPSoft2**. In the ex-works state there are 4 different users in **TEMPSoft2**. The **Standard**, the **master** and the **prof** user have adapted access rights. The existing system administrator **admin** has all access rights to the system.

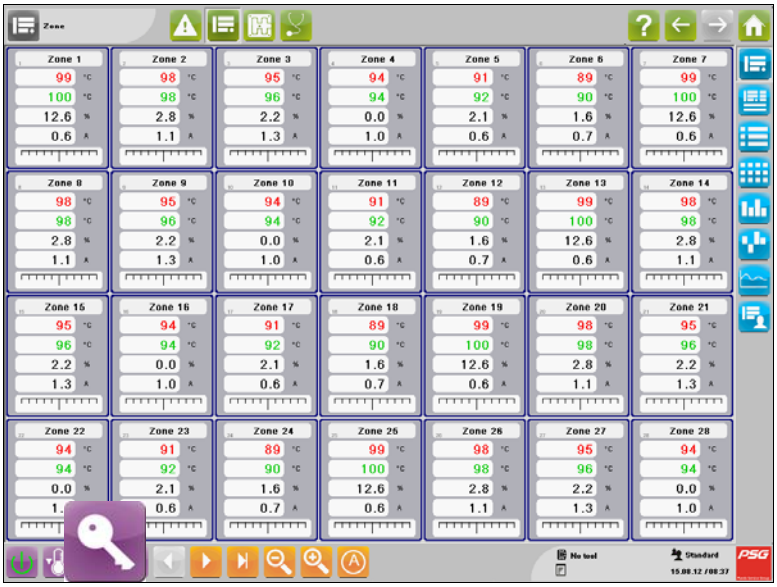
After start of **TEMPSoft2**, the profile of the standard user is activated. The standard user is always active, if no other user is logged into the system. Which user is currently logged in, is to be identified by the current settings down right.

By a login other users are activated and/or deactivated after logout.

Directly after start-up of **TEMPSoft2**, the system administrator should check the access rights of the standard user. The standard user should be always the user who has the least rights in the system.

Change setting	See Chapter↗User Administration

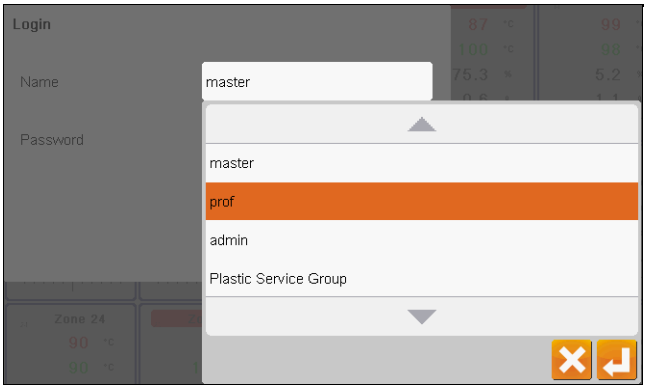
6.4.1 Login



Login

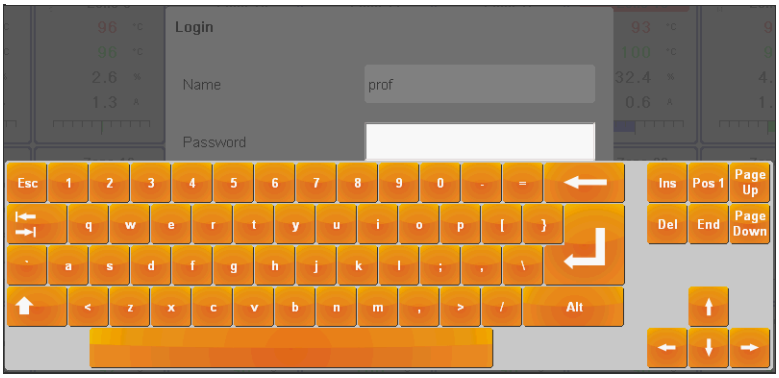
Press key

The user **prof** should be logged in.



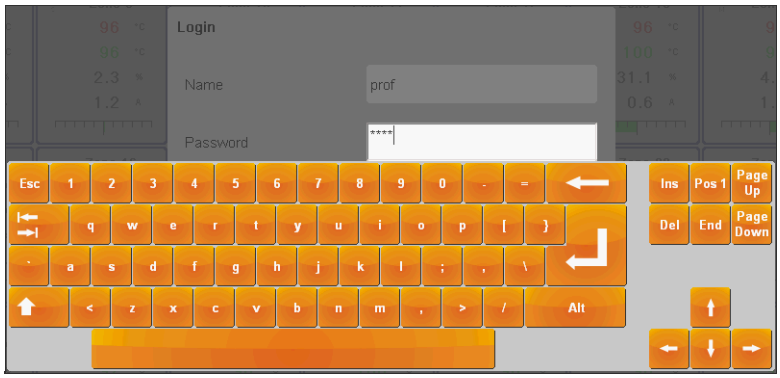
Should another user log in, select the field NAME and choose another user out of the list of values.

Confirm



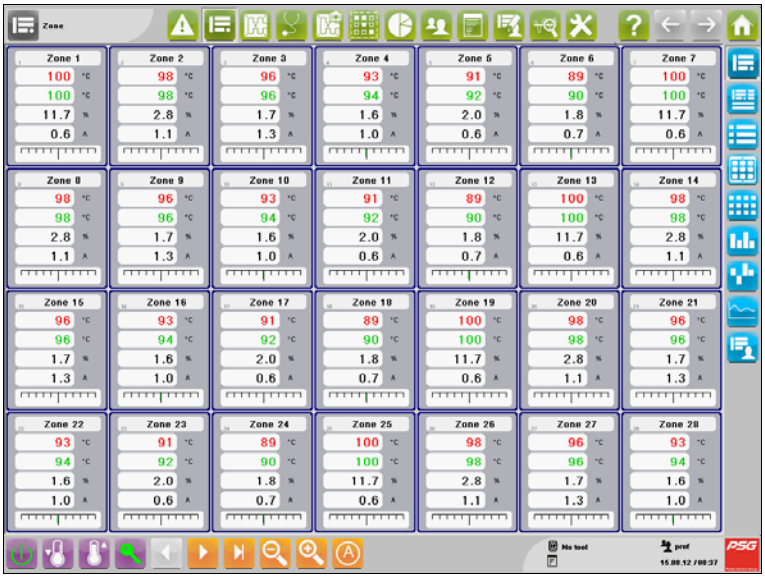
Select field PASSWORD.

Enter the password using the visual keyboard.

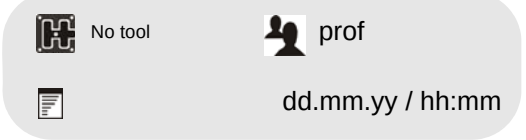


Confirm

Confirm

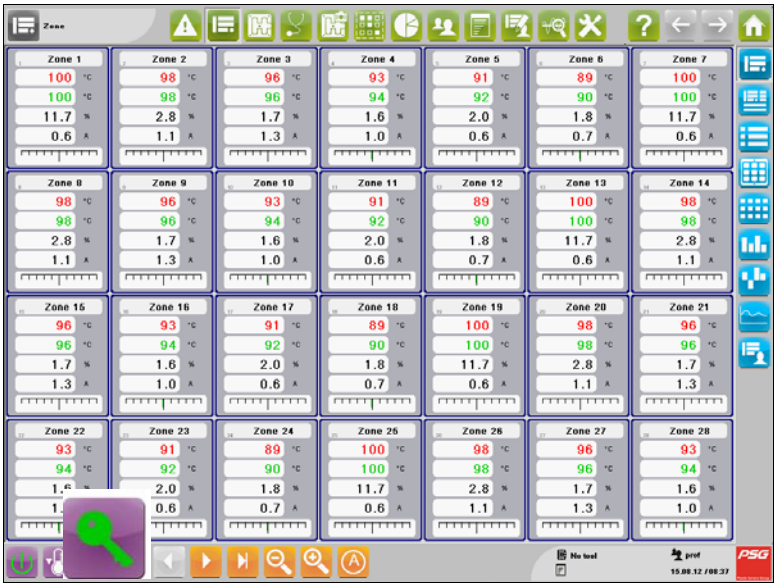


The user **prof** is logged in, see current setting down right.



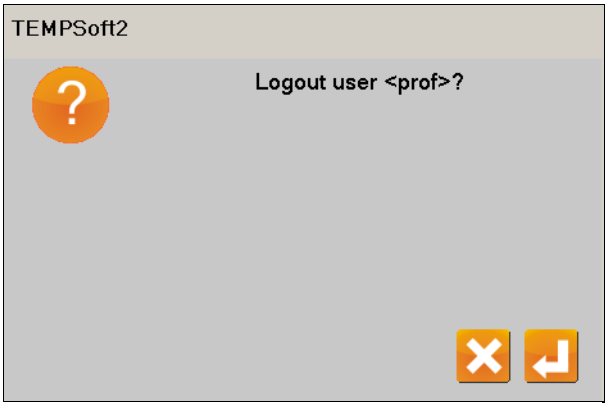
A user is logged in, the symbol of the key is **green**.

6.4.2 Logout



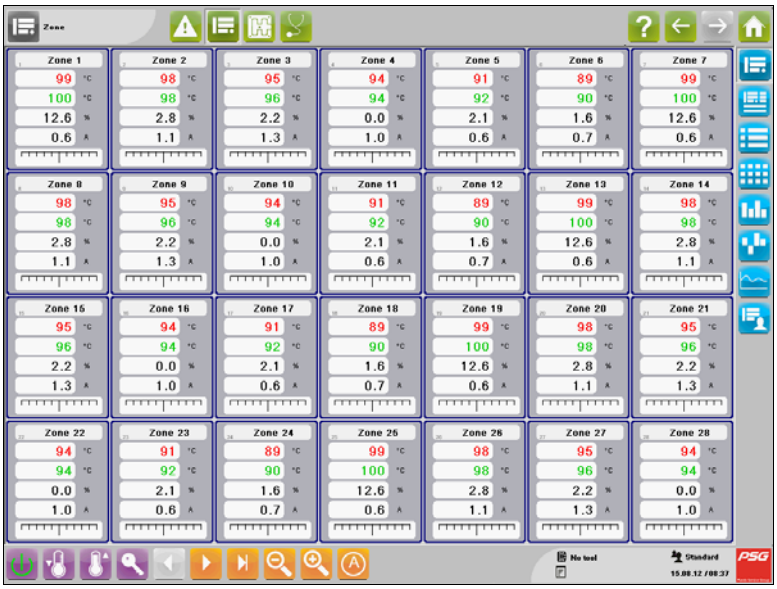
Logout

Press key

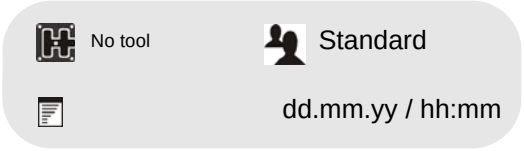


The logged in user **prof** is logged out.

Confirm



Is no user logged in, see current setting down right



No user is logged in, the symbol of the key is white.

On completion of the entries, it is recommended to log out from the system by activating the key LOGIN/LOGOUT again. If this is forgotten, the active user is automatically logged out after a period in which no operation takes place, which is adjustable by the system administrator (see chapter ↗TEMPSoft2 Setting - Program settings ↗Logout time).

The standard passwords should be changed after start-up of the system by the user **admin** in the user administration.

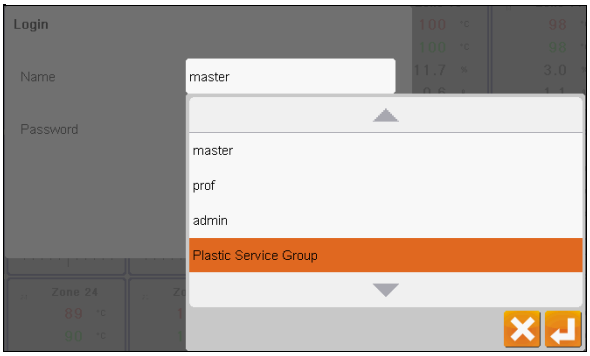
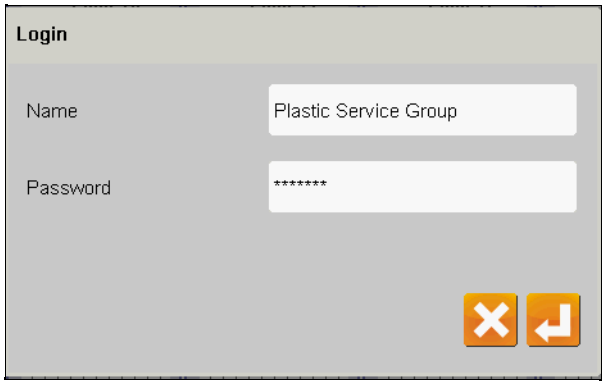
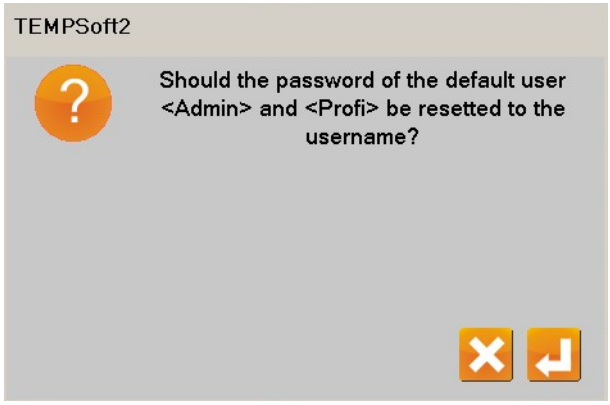
Standard passwords:
admin Password: admin
prof Password: prof
master Password: master

6.5 Reset Passwords

Description	In case the password for user **prof** and/or user **admin** is unknown, these passwords can be reset to default setting (see chapter ↗Login/Logout).
How it works	By login as user Plastic Service Group (password: PWRESET) and after confirmation the two passwords are reset to default. Thereafter the passwords should soon be changed by the user administration.
What good is it	In urgent cases, it may be necessary to operate functions, menus and/or parameters, which are not available for the operator. Is the person, that knows the password, not present, or the password was forgotten, the operation is in such an emergency possible after appropriate activation.

Change setting	None

6.5.1 Login

Assumption: NO user is logged in (otherwise see chapter ↗Login/Log-out).	
Login	Press key
	Select the field NAME and chose **Plastic Service Group** out of the list of values. Confirm
	Select field PASSWORD. Enter the password (PWRESET) using the visual keyboard. Confirm
	Confirm
	Confirm or reject

7 Functions

In this chapter all functions and corresponding parameters of hot runner controllers are described.

7.1 Heating current measuring - and - monitoring

Description	The objective of heating current measuring and monitoring is: ▪ to determine heating currents by measuring ▪ to compare measured values with setpoint values and tolerance ▪ to execute a plausibility check The heating current measuring is implemented in a fixed time raster.
How it works	Beside the display of the active heating currents, the heating current measuring provides information on the heater's condition (total fail, partial fail if heaters in parallel) and monitors current data considering a tolerance band. It monitors power controller condition and reports an alarm for continuously running heating output (e.g. permanently short-circuit SSR's), which can cause damage from overheating. It supports a number of controller functions. For example, bad adjustments of control parameters can be avoided because the automatic parameter identification (auto tuning) is only started if a corresponding heating current is recognized in the control zone, i.e. when it is certain that the zone is ready for heating. Else, the starting of the identification function is delayed until a heating current is recognized.
What good is it	Hence, a wrongful adaptation is prevented without user input or additional software.

Description	Heating current measuring is standard in each hot runner controller. The heating current measuring is done by so called current transformers. The hot runner controllers profiTEMP can display residual current. This indicates important information on the status of the heater in the hot runner and gives early enough notice of a damage.
What good is it	One can react immediately and longer downtimes due to unnecessary tool removal and repair are omitted.

Change setting	profiTEMP	TEMP-Command
	|pT[P005] Current Tolerance|	|TC[P005] Current Tolerance|
	See parameter description of the corresponding hot runner controller	
	See chapter↗Automatic ramp	

7.2 Automatic ramp

Description	The different dimensions of zones in the hot runner cause different heating-up times and different temperature levels. That means, that the nozzles have already reached the setpoint value and the manifold zones are still far from. Herefrom result temperature dependent expansions of steel, which cause unwanted mechanical tensions.
How it works	The automatic ramp function was developed to eliminate the causes of mechanical tensions. All zones are uniformly heated up. All zones orientate themselves automatically on the slowest zone. Its actual value is a reference for the setpoint value for the other zones.
What good is it	With this measure all zones remains at heating-up automatically on the same temperature level. The hot runner is disburdened and protected. Hereby damage is reduced and service intervals are extended. Maintenance costs are reduced.

Change setting		profiTEMP	TEMP-Command
	a	|pT[SP02] Automatic ramp tolerance band|	|TC[SP08] Tolerance Band for Automatic Ramp|
	b	|pT[SP03] Automatic ramp setpoint (value) change|	|TC[SP20] Minimum Setpoint Value Change for Automatic Ramp|
		|pT[P022] Automatic ramp|	|TC[P018] Automatic ramp|
		See parameter description of the corresponding hot runner controller	

The maximal temperature difference of each zone based on the reference zone during heating-up is configurable (parameter (a)). In the event a zone exceeds this limit the output value will be corrected.

A zone is taken off the link of the automatic ramp, if

- a sensor error (e.g. FAL) occurs in the zone
- the zone is in manual mode
- the manual temperature ramp is active
- the zone is passive

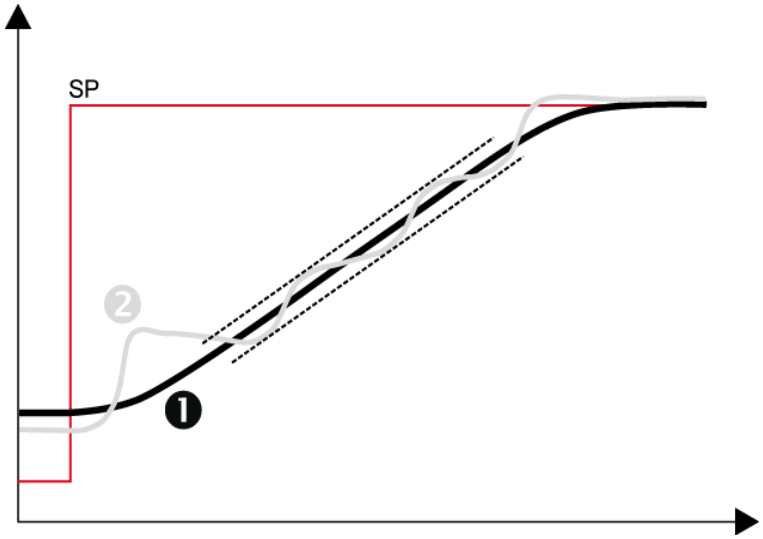
The automatic ramp function is triggered 5 K before reaching the setpoint values; the zones heat up to the final setpoint value without any output value intervention.

Specifies the minimum setpoint value increase to start the automatic ramp function.	Parameter (b)
Specifies the maximum difference between the actual values and reference zone.	Parameter (a)

Example

Temperature trend of two zones with different rate of rise with activated automatic ramp.

After Heating identification of zone 2, both zones are heated-up together to the final setpoint value.



7.3 Heat'n'Dry

Description	With Heat'n'Dry profiTEMP hot runner controllers offer a function for low-stress heating-up of heaters.
How it works	During the heating-up process the Hot Runner is heated up with step-by-step heating capacity. During heating-up the residual current is checked. Exceeds the residual current the limit value set, the heating is done with reduced heating capacity, as long as the residual current is under the limit value again. Heat‘n‘Dry has higher priority than function start-up operation.
What good is it	Heat'n'Dry guarantees a longer lifetime of heating elements. It is ensured, that a heating-up to the set setpoint value is only done, when it is 100% guaranteed that there is no moisture in the isolation material of the heating elements. By this, damage can be prevented resulting of short-circuits in the heater.

Change setting		profiTEMP	TEMP-Command
	a	|pT[SP05] Max. residual current|	|TC[SP22] Limit for Switching-off Leakage Current|
	b	|pT[P027] Heat‘n‘Dry|	|TC[P098] Heat‘n‘Dry|
		See parameter description of the corresponding hot runner controller	

When molds are stored for a longer time, the insulating material for the electrical heating elements can draw moisture. This moisture can at rapid heating (without Heat'n'Dry) lead to vapor pressure inside the heater and cause damage. Furthermore this moisture leads to leakage currents on connected protective conductors, that disconnects fault-current circuit breakers and prevents the heating-up.

Heat 'n' Dry executes a gentle heating-up with stepwise increasing of the power supply. The leakage current is permanently checked. The moisture is completely dried by a setpoint value of 110°C.
The heating-up on the final setpoint value starts first, when it is assured, that

- the error current lies below a adjustable limit value
- in the heating elements is no longer moisture.

The function Heat'n'Dry is started, when the start conditions

- Actual value < 90°C (194 °F)
- Setpoint value > 110°C (230 °F)
- Heat'n'Dry is enabled by parameter

are met.

During heating-up of the zones with active Heat'n'Dry function, also the inactive zones for Heat'n'Dry are adjusted to 110°C. After the zones with active Heat'n'Dry are adjusted to 110°C, all zones are adjusted to their preset setpoint values.

While the Heat'n'Dry function is running, no current measuring is executed.

By the parameter (a) the maximum admissible value for the leakage current is set.

The function can be activated/deactivated by the parameter (b).

The function Heat'n'Dry has priority to function see function ↗Start-up Mode.

7.4 Auto Tuning (Identification)

Description	The hot runner controller profiTEMP offers a procedure, that is named identification.
How it works	The heating control parameters are automatically calculated after a setpoint value jump of 40 K
What good is it	The hot runner controller adapts itself to the factors of the connected control system.

		profiTEMP	TEMP-Command
Change setting	**a**	|pT[P030] Identification|	|TC[P032] Identification Heating|
	b	|pT[P031] Loop control|	|TC[P033] Loop Control in Case of Identification|
	c	|pT[P032] Cutback|	|TC[P035] Setpoint Value Cutback|
		See parameter description of the corresponding hot runner controller	

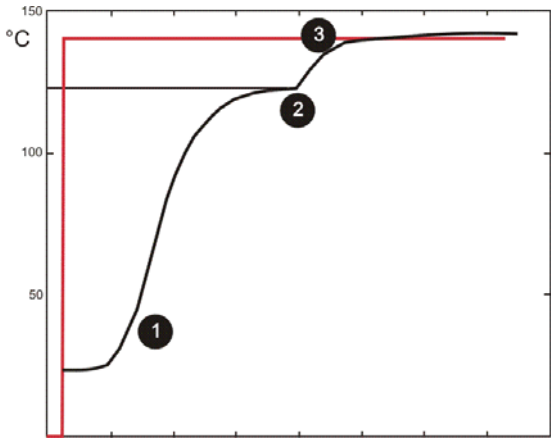
By loop control is specified whether the calculated heating control parameters during identification are directly checked with the setpoint value and whether they are to be corrected.

By cutback is specified, whether this identification is made directly for the setpoint value or below the setpoint value.

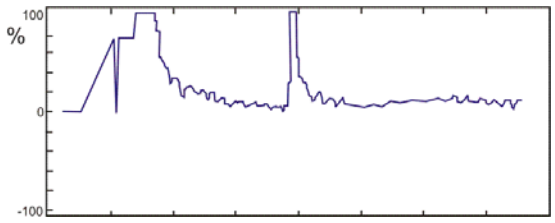
1 After a setpoint value jump from 0°C to 140°C the Heating control parameters are recalculated during heating-up.
Identification (a)... = On
Loop control (b)... = On

2 20°C (setpoint value cutback) before reaching the setpoint value of 140°C the calculation of the heating control parameters is finished.
...Cutback (c) = 20

3 Control is executed on the specified setpoint value.



Setpoint value / actual value



Output value

7.5 Start-up Mode

Description	The start-up operation is one of the eldest functions in the hot runner controllers. The main reason for the function is the hygroscopic characteristic of the isolation material Magnesium oxide used in the heaters. That means, that this material binds moisture and influences therefore the electric isolation negative. Voltage application may result in damage of the heater.
How it works	That should be avoided by start-up operation. At start-up, the zones are not directly heated up to setpoint value with full heating power, but for a defined start-up time to a setpoint value of 100°C. During this time the moisture is completely dried in the heating element, so that after elapsed start-up time, heating up to the end setpoint value is safe.
What good is it	The start-up operation implies high operating reliability and extension of lifetime of the heating elements, what is reflected in low operating and maintenance costs.

	profiTEMP	TEMP-Command
Change setting	|pT[P015] Start-up mode|	|TC[P092] Timer 3 Definition 1
	|pT[P016] Start-up time|	|TC[P091] Timer 3|

7.6 USB support

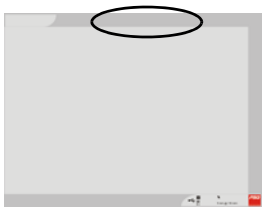
Description 	USB flash drives are now common media for data exchange. They are readily available and easily manageable. All hot runner controllers profi-TEMP are equipped with a USB port. A variety of functions is possible in the areas of data backup, service, update and quality assurance.
How it works	Functions, that save and/or load data on and/or from the USB stick, are enabled for the user, as soon as an USB stick is recognized on the USB port.
What good is it	For queries of the customer, thus can be used more information. This makes the service easier, faster, more professional. With this feedback the customer may be sent back corrected data, which he can then simply write it into his controller.

7.7 Digital inputs & Digital-/Outputs

Description	The simplest method to communicate with the injection molding machine is by the digital inputs and digital -/ outputs of the hot runner controller.
How it works	The hot runner controller issues the signal for enabling of the machine by this. Hereby the proper status of the hot runner is signalized to the injection molding machine. The hot runner controller receives for example signals for Boost and Standby mode from the injection molding machine. The function of the digital inputs and the digital -/ outputs can easily be customized.
What good is it	The enabling of the machine guarantees reliability of the production process, because the enabling is only given to the machine, when the conditions are proper in the hot runner. Also all other alarm status may be linked with the machine to react on critical alarm status immediately.

Change setting	profiTEMP	TEMP-Command
	Digital inputs	See chapter view inputs 1)
	Digital - / Outputs	See chapter alarm management 1)
	See parameter description 1) of the corresponding hot runner controller	

8 Tool management



Call tool management

During production, hot runner controller are often used with different forms. It is very important to adapt the hot runner controller by a simple push on the button to the new situation.

That's why the tool management is a central element in **TEMPSoft2** .

The tool management offers an application-orientated operation and data administration management, where the function of the hot runner controller are subordinated.

The user can assign to each tool

- ↗Tool information
- ↗Tool data
- ↗Reference
- ↗Zone names
- ↗Program
- ↗Group
- ↗View
- ↗MoldSnapshot
- ↗Images
- ↗MoldCheck result
- ↗MoldCheck waiting time

This means, that

- the data of the projects are clearly structured stored with **TEMPSoft2**
- the data may be found at any time convenient

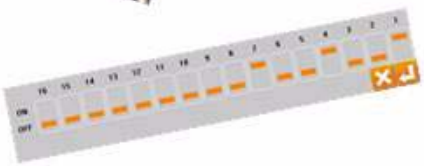
Tool

↗Tool information

With the tool information, a comment can be added by the operator for the tool.

↗Tool data

In the tool data the **tool coding** is specified.
A program and a view can be assigned, which are used after identification of the tool.



↗Reference

A MoldSnapshot and/or MoldCheck result file can be used as reference for comparision.

↗Zone names

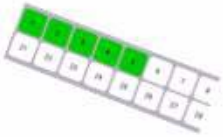
In standard, the zone names are specified by ZONE <CONSEC-UTIVE NUMBER>. The user can rename it, dependent on the tool and the application.

↗Program

A program in **TEMPSoft2** means a **data set with all parameters of all zones** of a hot runner controller. The programs support the customer at setting during often tool replacement and reduce the start-up phase.

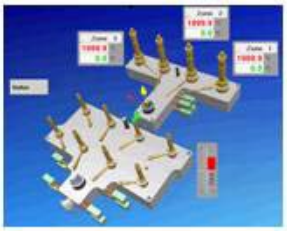
↗Group

To simplify the selection, **zones** can previously be combined **into groups**.



Edit New Open Print Delete

Administration



↗View

A user defined view offers by a drawing area the possibility to **combine picture elements**.

↗MoldSnapshot

MoldSnapshot takes a **snapshot** of the state of the hot runner. Here are the most important process data like e.g. setpoint values, actual values, output values, heating currents and control parameters saved.

↗Images

In the user defined view the **images** may be used as **background**.

↗MoldCheck result

MoldCheck is a **complete diagnosis of electric conditions** of the hot runner and the corresponding peripherals.

↗MoldCheck waiting time

Specifies the time for the MoldCheck function, when a **temperature rise > 10K** for a specific zone must have been detected.

Show

Activate

Transfer

Import

Export

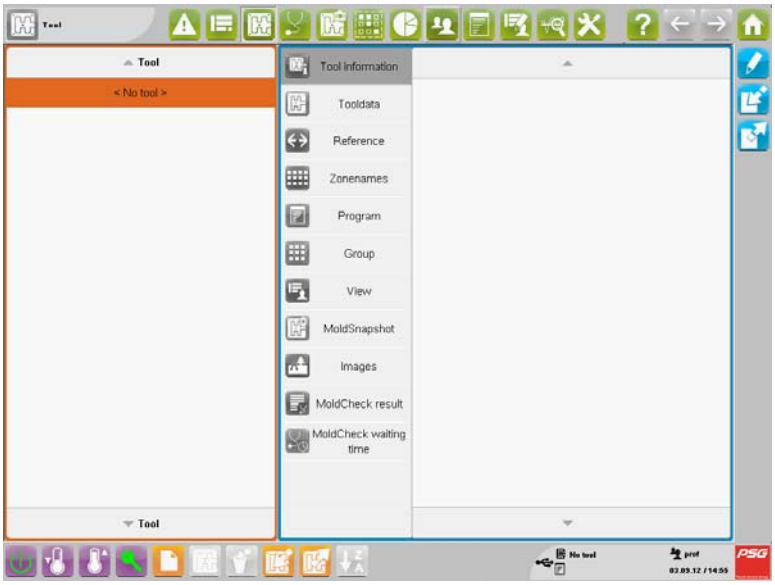
Sorting

Activate

8.1 Tool information

With the tool information, a comment can be added by the operator for the tool.

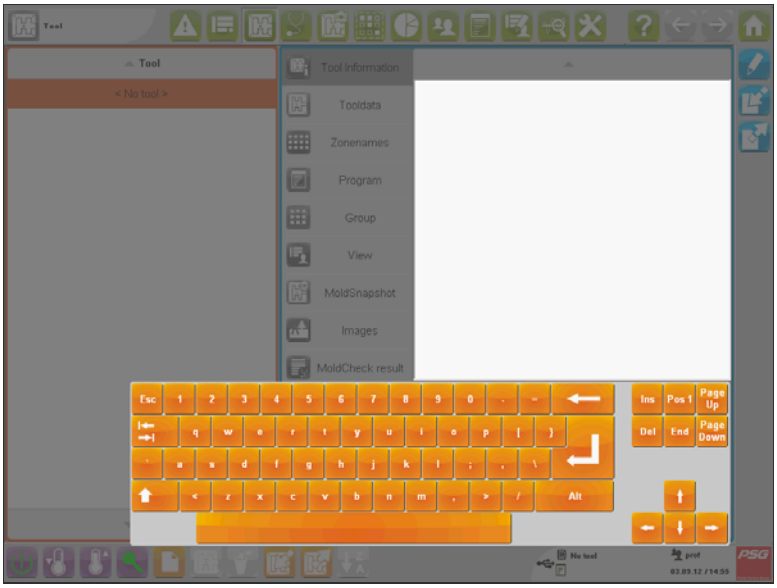
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



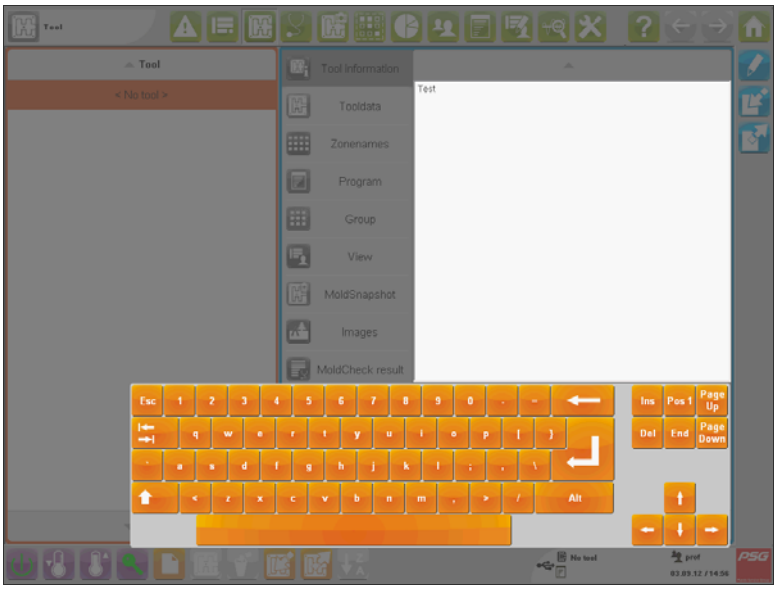
The tool management is displayed.

Select tool information.

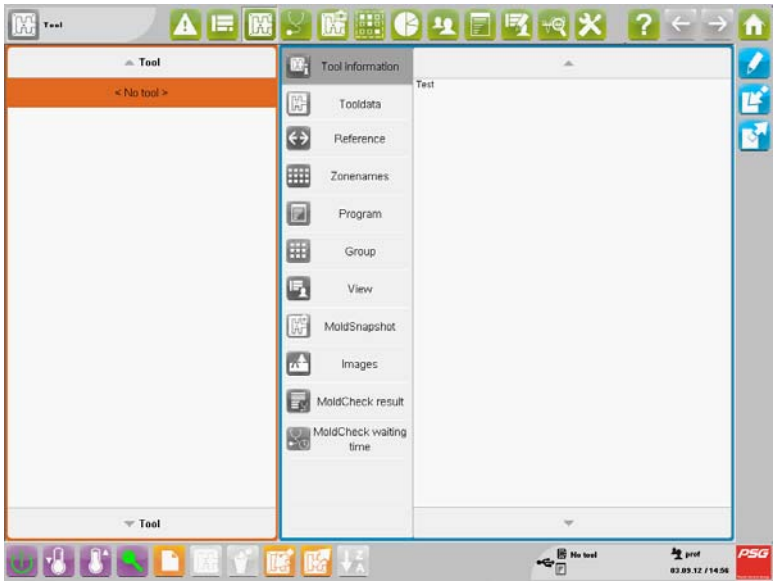
Press key



Keyboard is overlaid



Enter a user-defined comment using the visual keyboard.

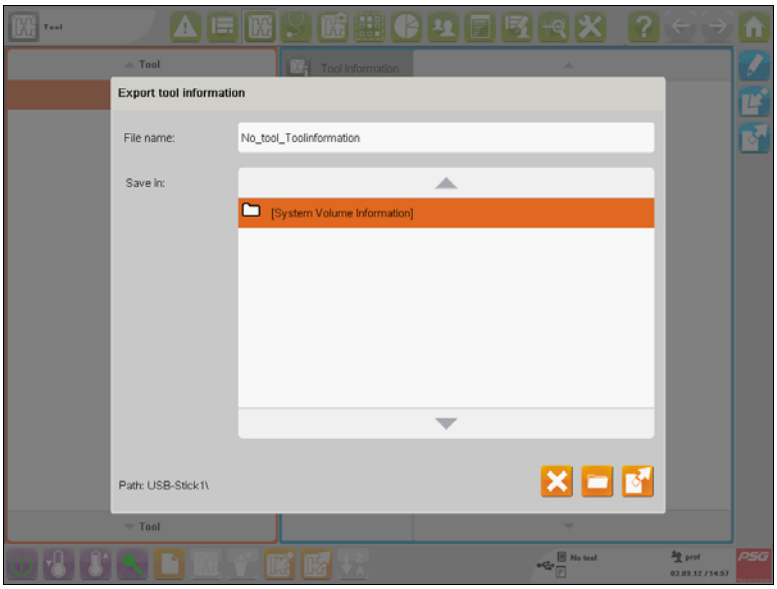


A comment is added to the tool.

8.1.1 Export tool information

The tool information of a tool is exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown and the function is canceled.	



Select tool on the left side, select tool information, press key

Should the default file name be changed, click into the field file name and change the file name by the visual keyboard.

Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate export	Press key

Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.

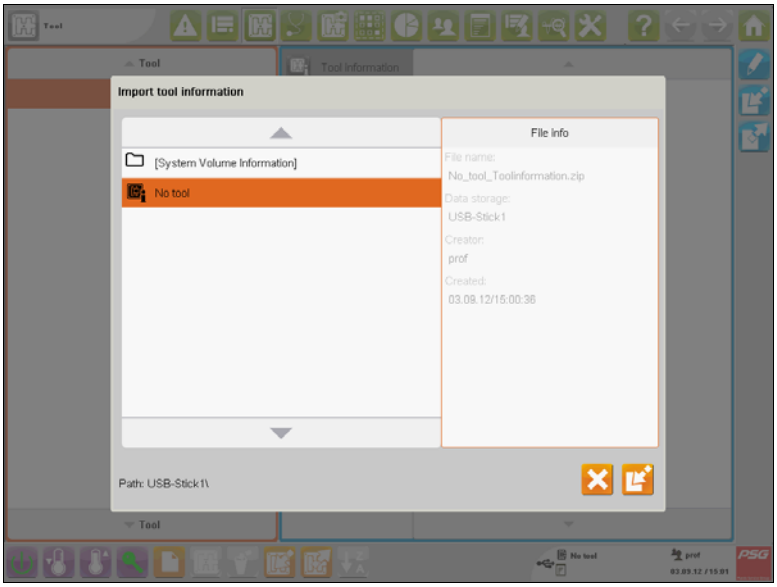
After completion of the dialogue, the status of the export is displayed.

8.1.2 Import tool information

The tool information of a tool is imported from a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown and the function is canceled.



Select tool, where the tool information should be imported, on the left side, press key.

Confirm or reject

Was a different file name, than the standard specified, note file info.

Cancel function — Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

Select a directory on the USB stick — Press key

or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate import after selection of file	Press key
Since only one file per tool is available in **TEMPSoft2**, the file is imported without any further confirmation.	
After completion of the dialogue, the status of the import is displayed.	

8.2 Tool data

Is a tool coding available for the tool, a coding information is sent to **TEMPSoft2** by the maximal 16 digital inputs on plug.

The tool coding can be stored in the tool data, what guaranties a unique identification of the tool (see chapter ↗TEMPSoft2 Setting - Program settings - Tool coding).

A program and a view can be assigned, which are used after identification of the tool.

The fields

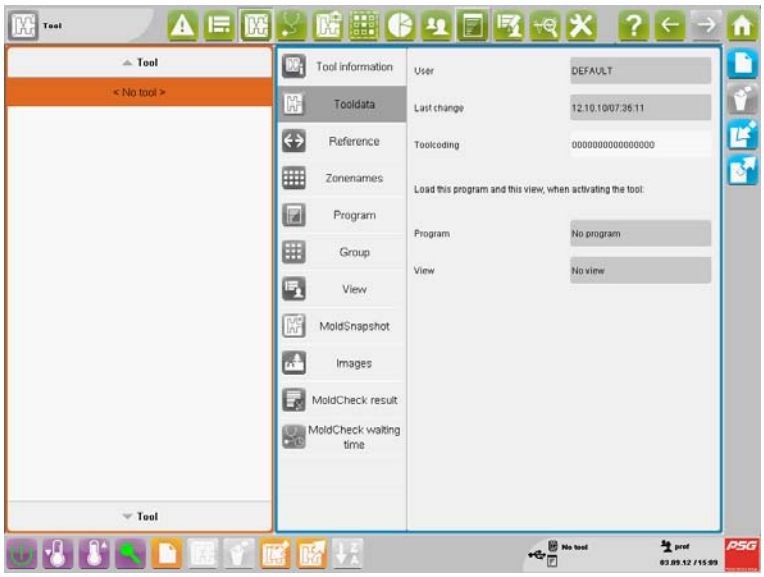
- User
- Last change

are automatically assigned by **TEMPSoft2**, when a new tool is created

8.2.1 Create a new tool

Before working with a tool, it must be defined first and created with a name.

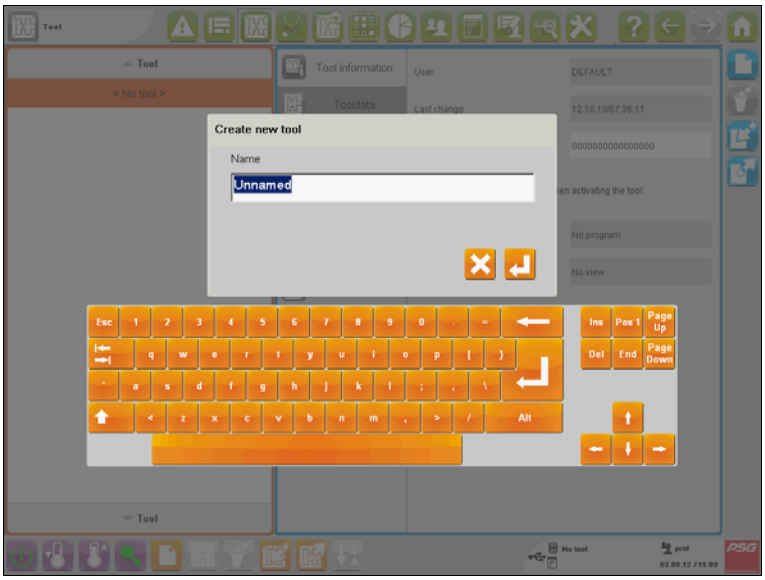
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



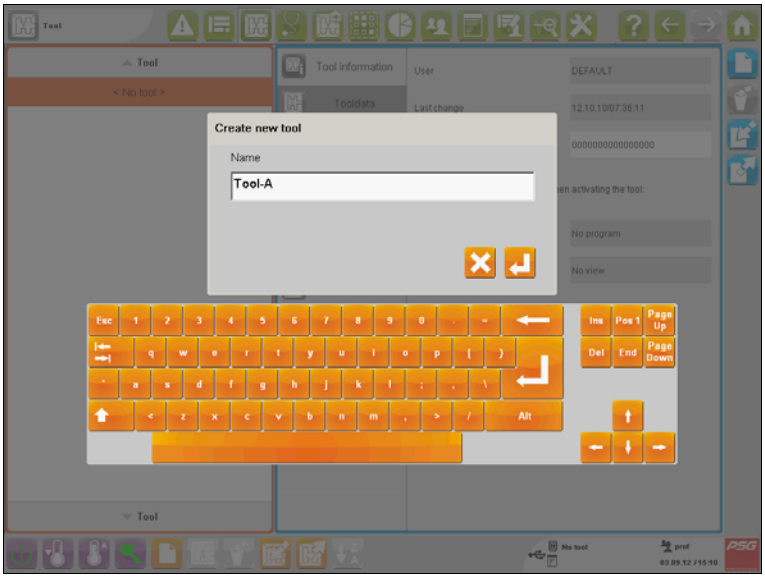
The tool management is displayed, tool data is selected.

A new tool named Tool-A is created.

Press key

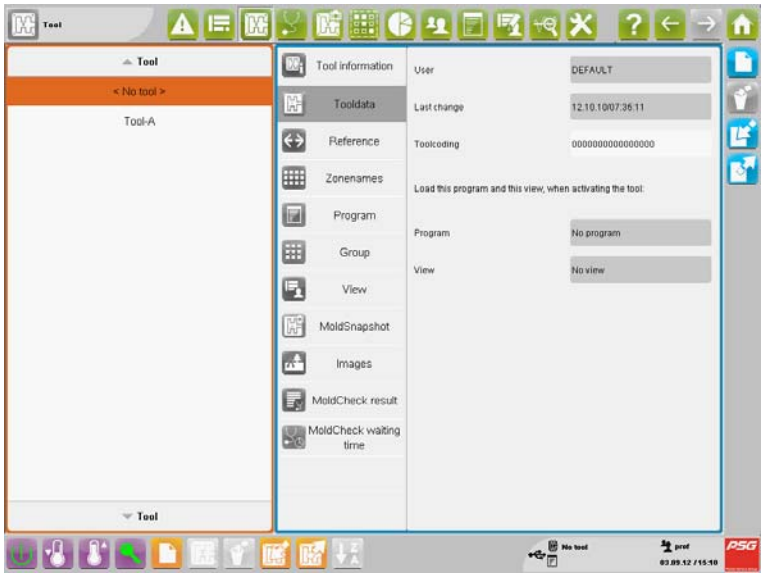


Keyboard is overlaid



Enter the name **Tool-A** using the visual keyboard

Confirm

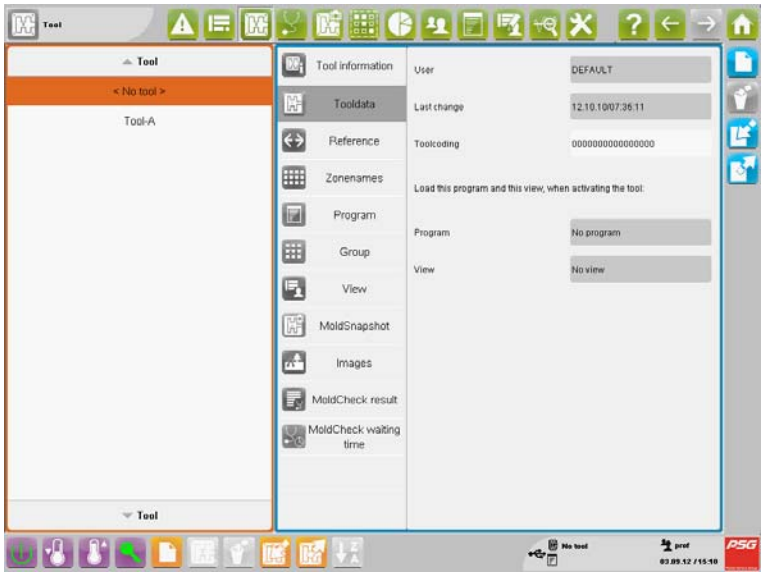


Tool Tool-A is created.

8.2.2 Specify tool data

Beside the tool coding, assigned to the tool, a program and a view can complete the tool data.

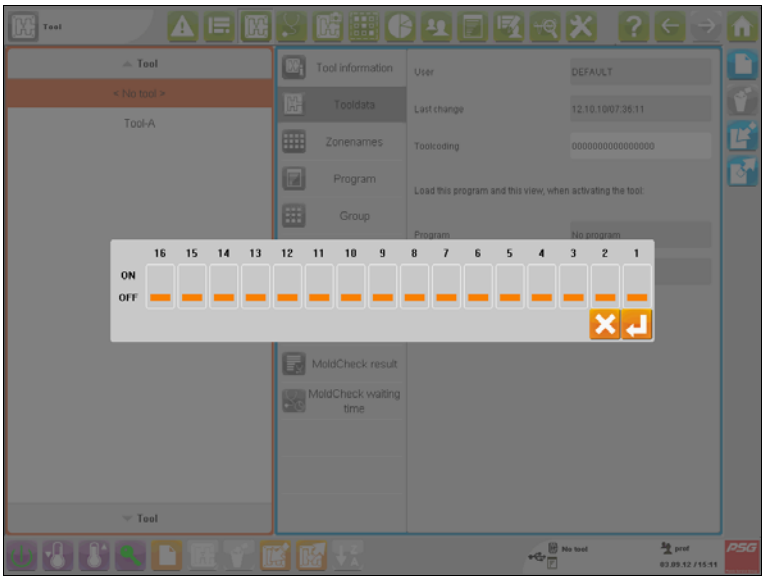
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



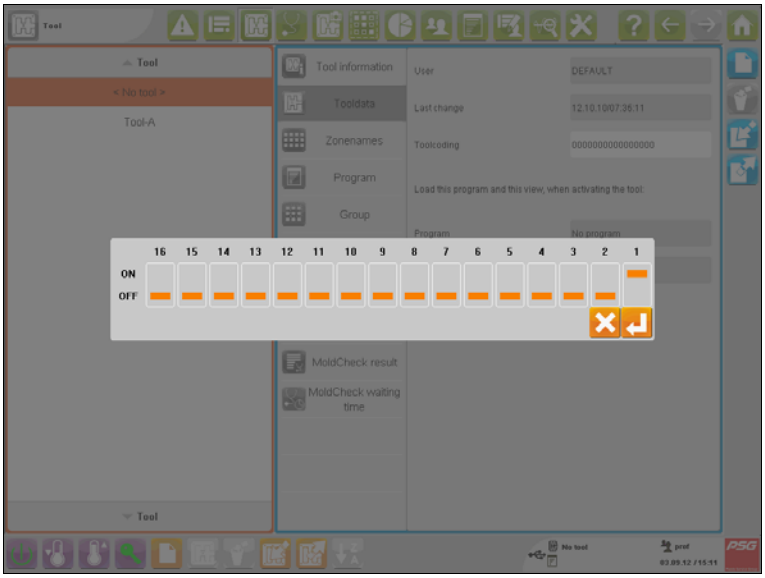
The tool management is displayed, tool Tool-A is selected.

Select tool data

Press key



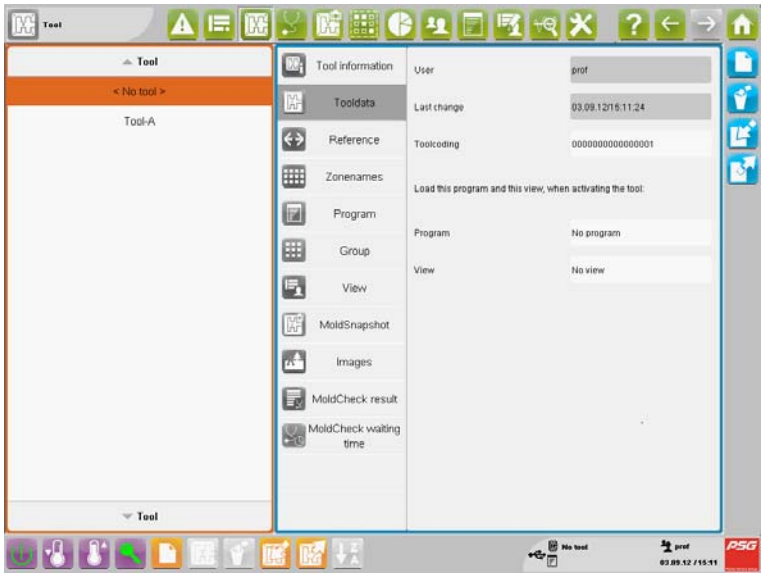
Display is overlaid



By selection of the bar in field 1 (change from OFF to ON) the tool coding is activated.

Address of the tool is 1_{DEC}

Confirm



Tool Tool-A with tool coding

Only when the tool coding is active, program and view can be assigned.

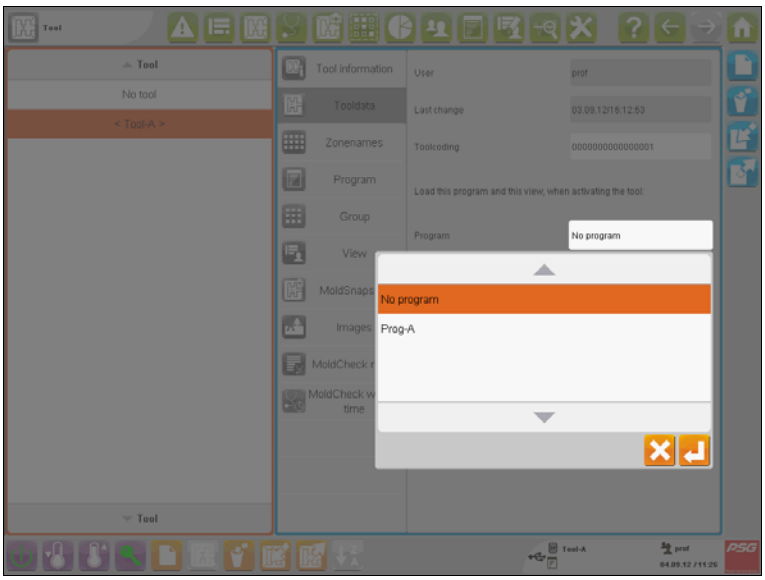
Only for ↗TEMPSoft2 Setting - Program settings ↗Tool Coding = ON and ↗Configuration - tool coding = O, the tool coding is evaluated in **TEMPSoft2** and is shown in the current settings.

Tool-A
0000000000000001

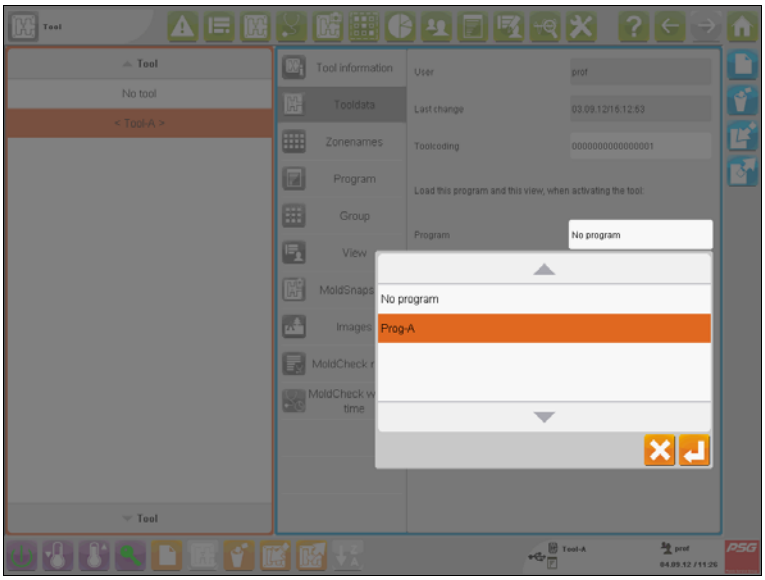
prof

dd.mm.yy / hh:mm

Active tool, see current setting down right (see chapter ↗Activate tool)

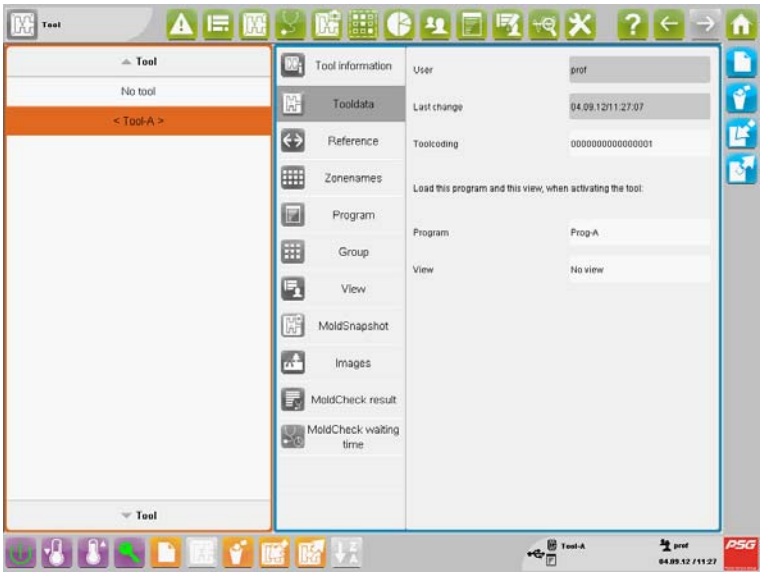


An existing program (see chapter ↗Program) is assigned to the tool.

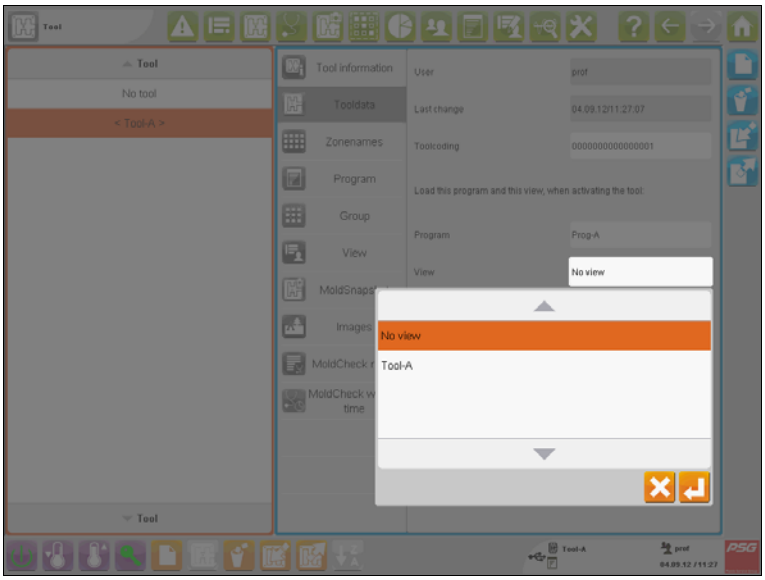


Select program

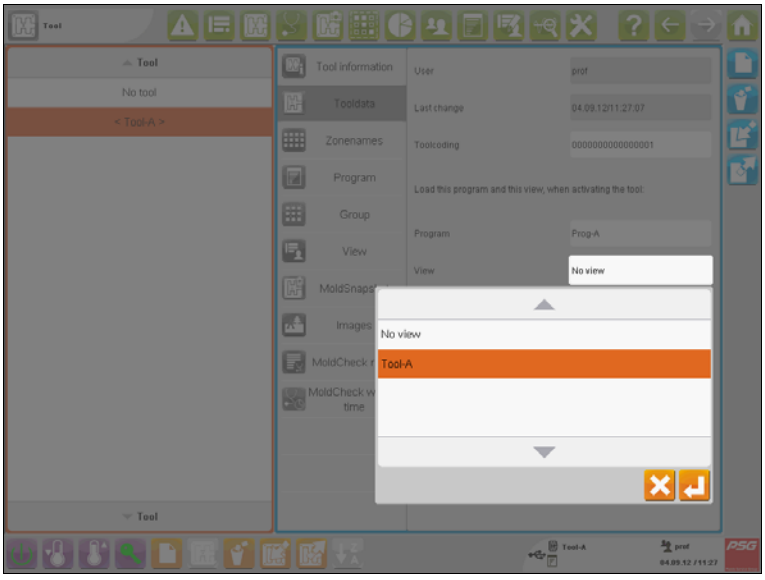
Confirm



A program is assigned to the tool.

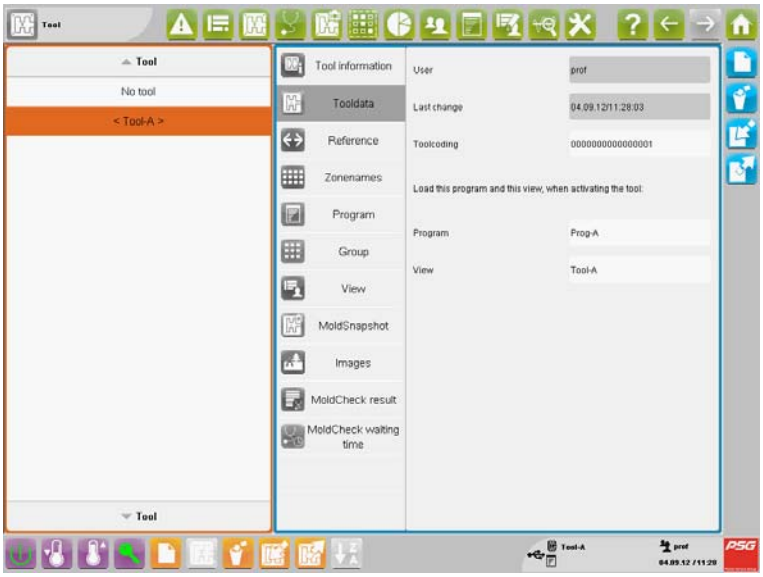


An existing view (see chapter ↗View) is assigned to the tool.



Select view

Confirm



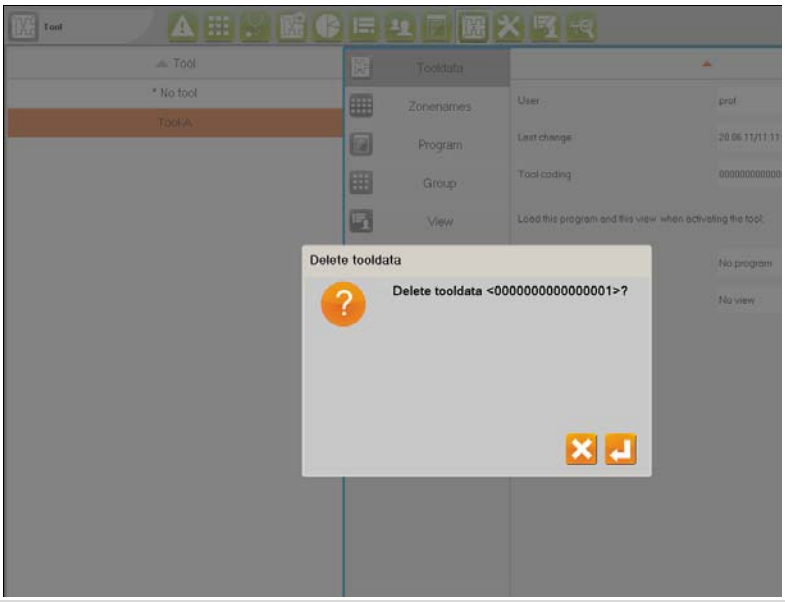
A view is assigned to the tool.

Is more than one tool data existing for one tool, e.g. with different tool coding, in the view right can be scrolled by the arrow keys shown (up and down).

8.2.3 Delete tool data

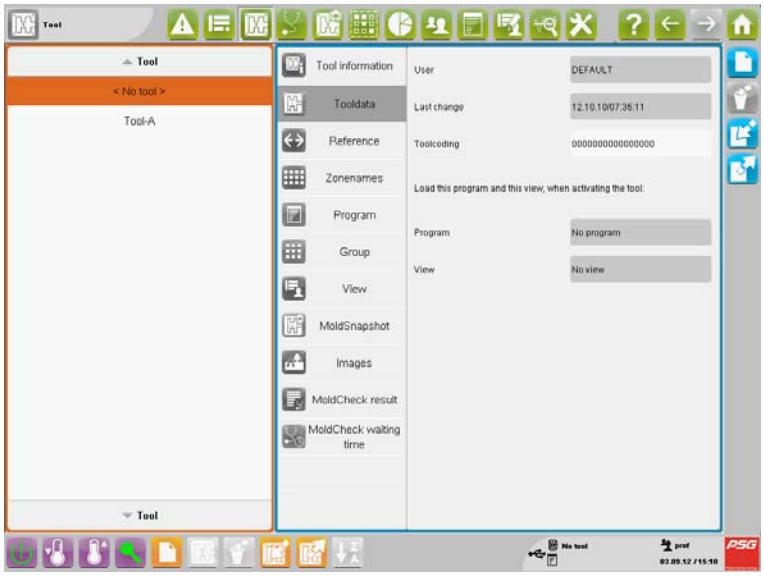
Delete the tool data for a tool.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



Select tool on the left side, select tool data, press key.

Confirm or reject



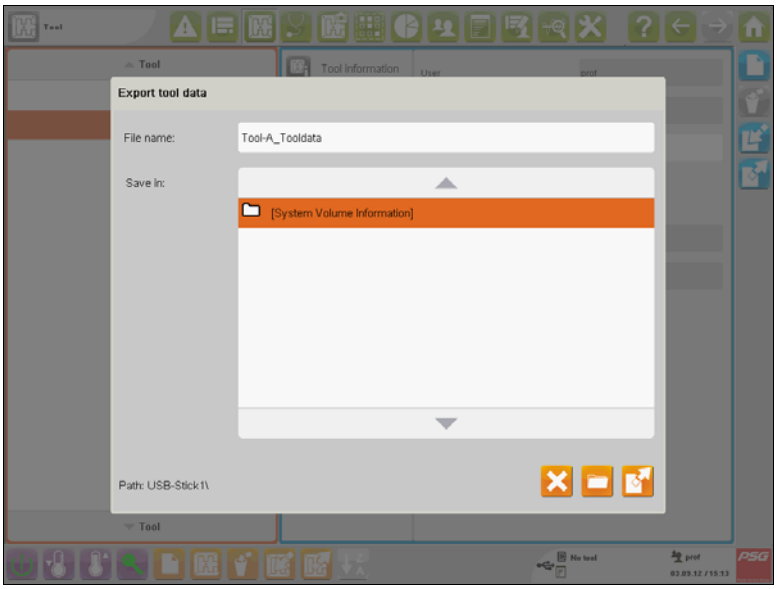
Tool data are deleted

8.2.4 Export tool data

The tool data of a tool are exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown an d the function is canceled.



Select tool on the left side, select tool data, press key.

Should the default file name be changed, click into the field file name and change the file name by the visual keyboard.

Cancel function

Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

Select a directory on the USB stick

Press key

or a directory on the USB stick by double click on

Return to previous directory by double click on

Activate export

Press key

Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.

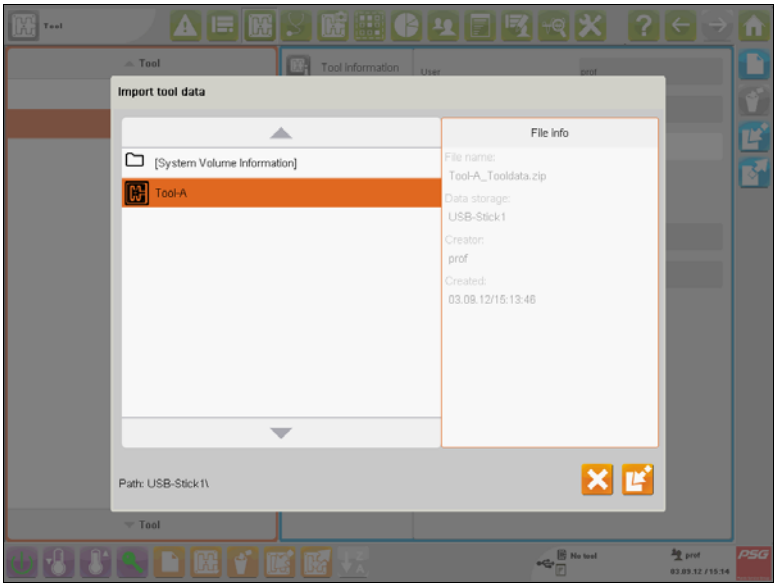
After completion of the dialogue, the status of the export is displayed.

8.2.5 Import tool data

The tool data of a tool are imported from a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown and the function is canceled.



Select tool, where the tool data should be imported, on the left side, press key.

Confirm or reject

Was a different file name, than the standard specified, note file info.

Cancel function — Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

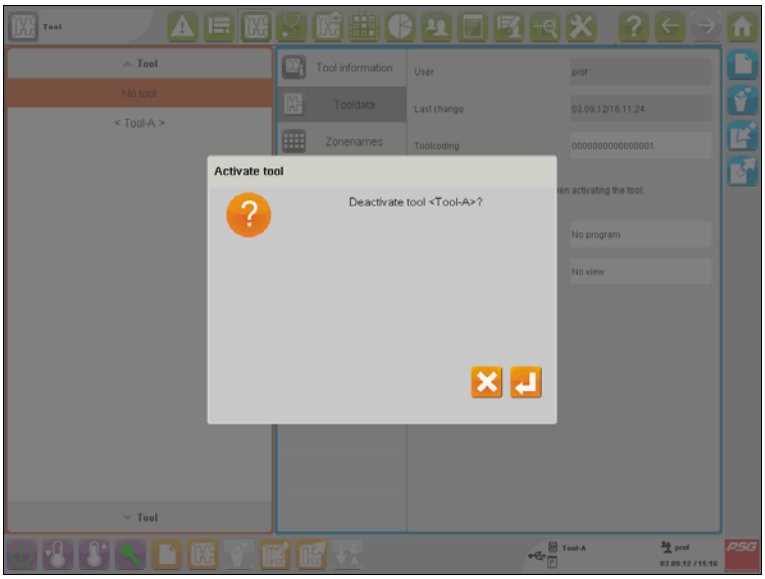
Select a directory on the USB stick — Press key

or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate import after selection of file	Press key
Before import it is checked, whether there is already a file with the same name in **TEMPSoft2**. The file can be overwritten and/or imported with another name.	
After completion of the dialogue, the status of the import is displayed.	
Is a tool with the same tool coding, like in the import file, already existing, the tool coding is not accepted.	

8.2.6 Activate tool

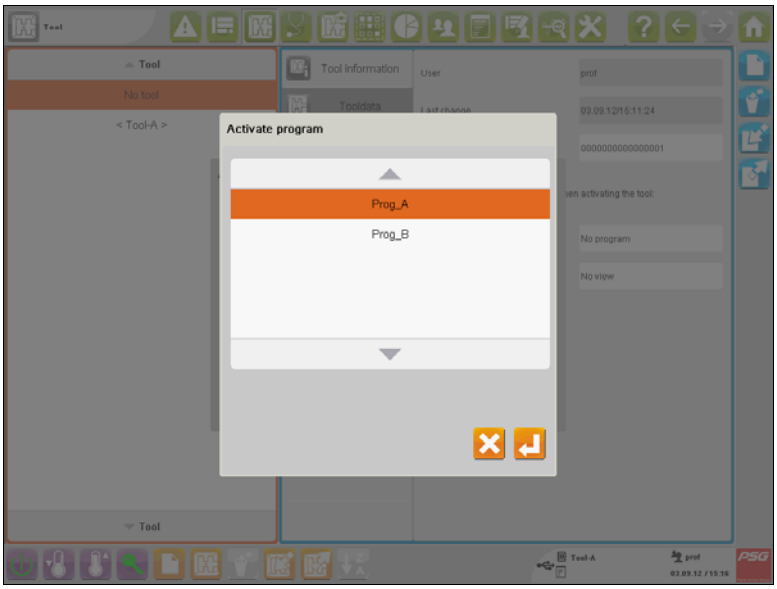
Is a tool active, it is shown in the current settings down right (see chapter ↗Current setting) and a bracket <---> around the tool in the tool management. Should another tool be activated, the current tool must be deactivated.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	



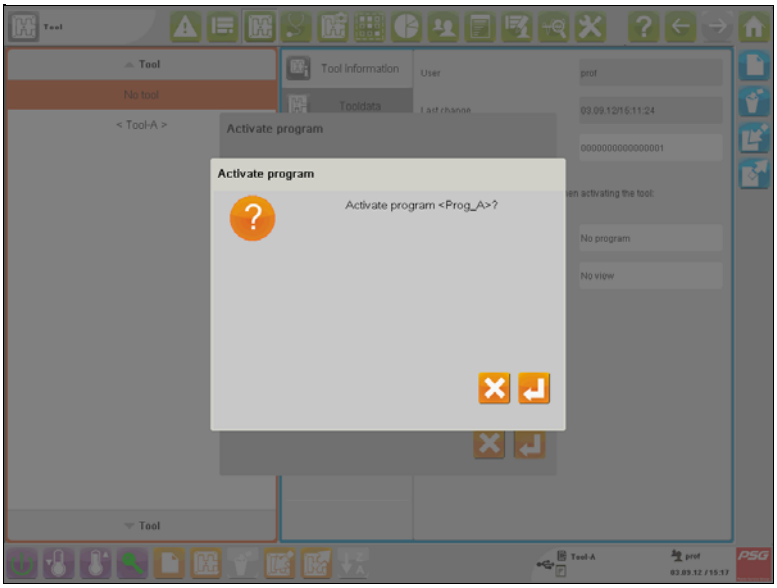
Select another tool on the left side, press key

Confirm or reject



Is at least one ↗Program assigned to the tool, the operator is asked, whether he wants to activate it. Are more programs assigned to the tool, a window is displayed, where one of the programs can be selected.

Confirm or reject



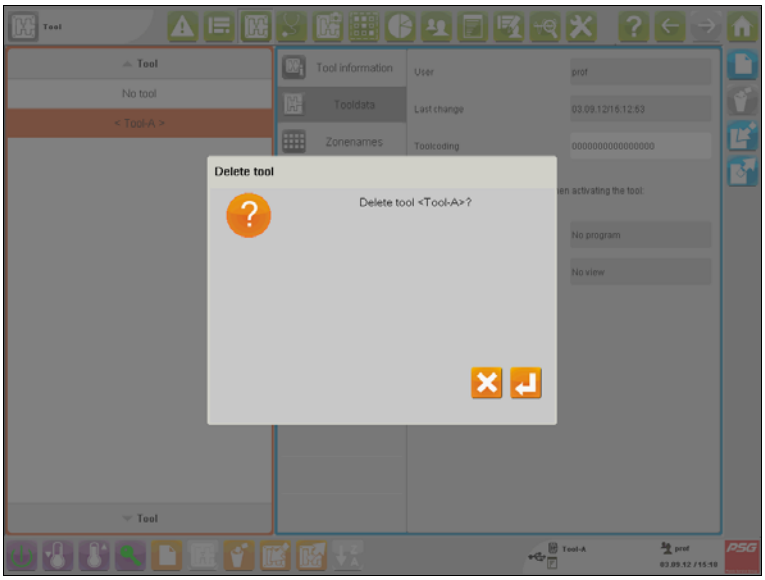
The program activation must be confirmed.

Confirm or reject

8.2.7 Delete tool

Delete a tool and the stored settings for it.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



Select tool on the left side, press key

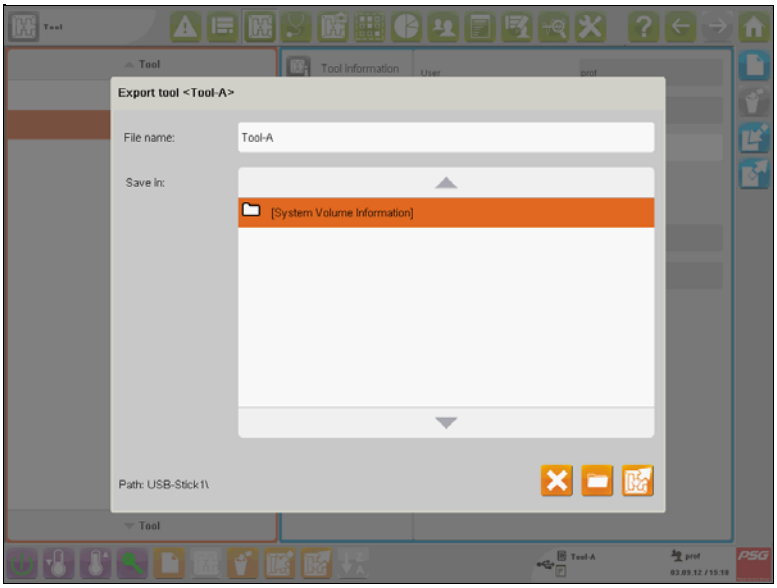
Confirm or reject

8.2.8 Export tool

The tool and the specified settings are exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown an d the function is canceled.



Select tool on the left side, press key.

Should the default file name be changed, click into the field file name and change the file name by the visual keyboard.

Cancel function

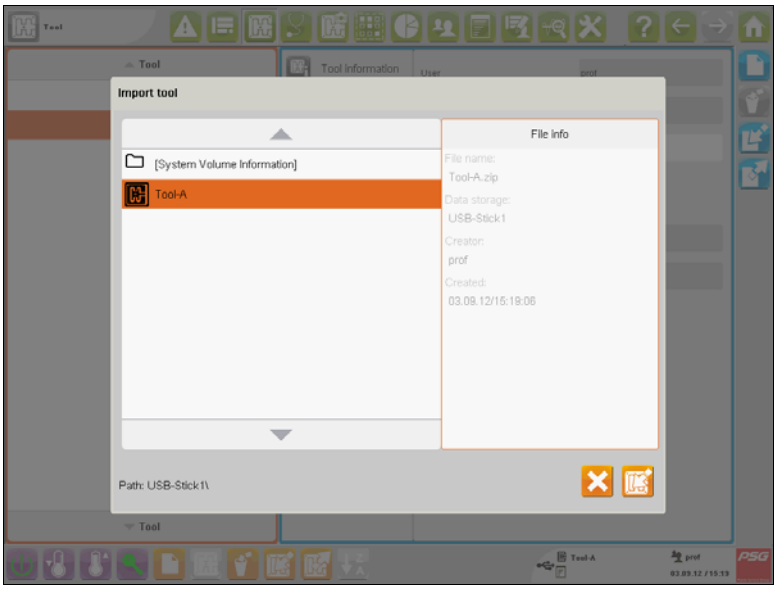
Press key

The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate export	Press key
Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.	
After completion of the dialogue, the status of the export is displayed.	

8.2.9 Import tool

The tool and the specified settings are imported from a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown an d the function is canceled.	



Select tool on the left side, press key

Was a different file name, than the standard specified, note file info.

Cancel function

Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

Select a directory on the USB stick

Press key

or a directory on the USB stick by double click on

Return to previous directory by double click on

Activate import after selection of file

Press key

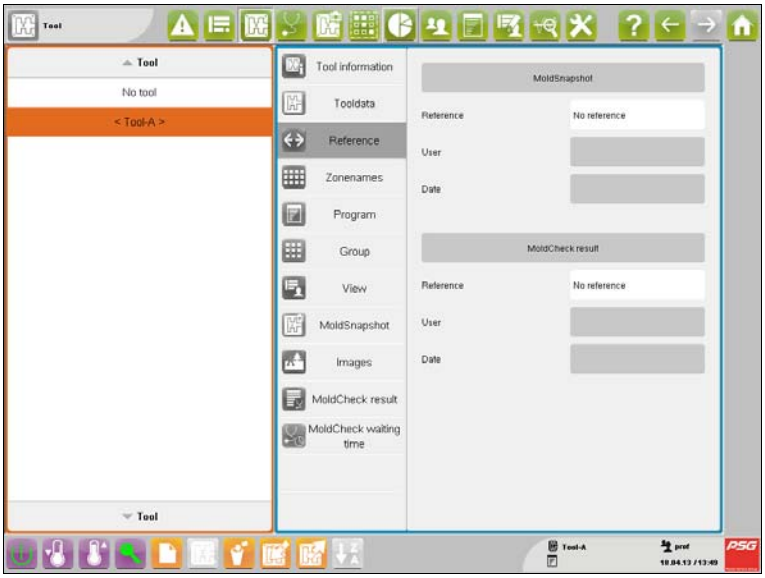
Before import it is checked, whether there is already a file with the same name in **TEMPSoft2**. The file can be overwritten and/or imported with another name.

After completion of the dialogue, the status of the import is displayed.

8.3 Reference

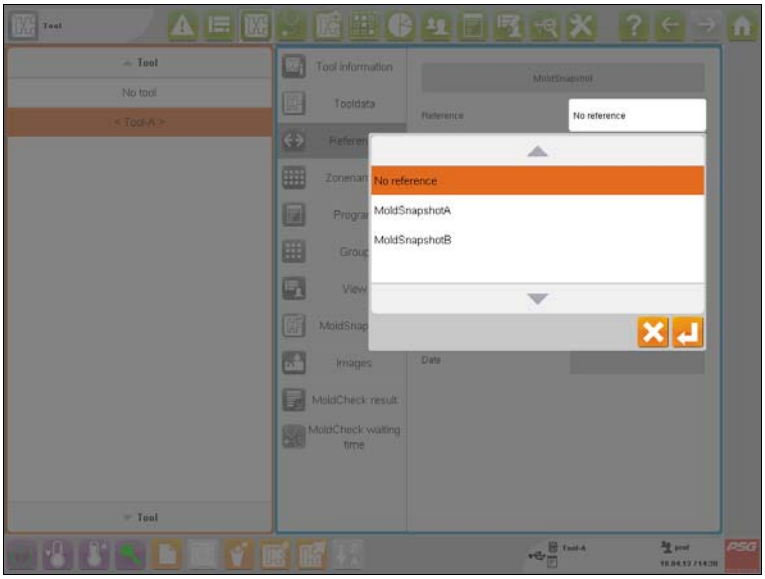
Was a ↗MoldSnapshot and/or a ↗MoldCheck result already stored, this file here can be used as reference for the comparision.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

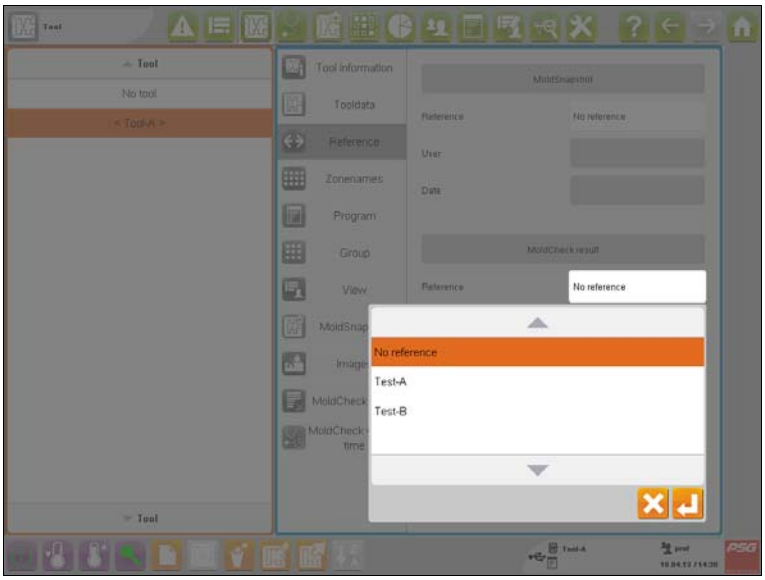


The tool management is displayed, tool Tool-A is selected.

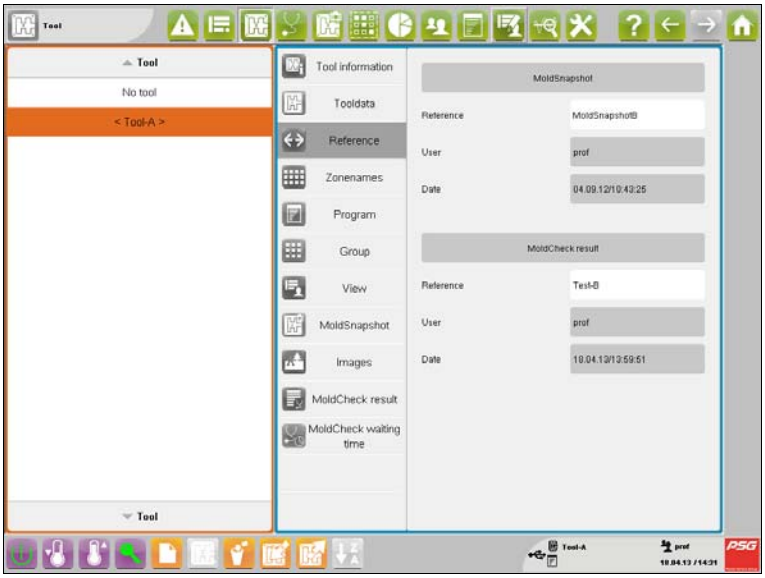
Select reference.



Select file for MoldSnapshot reference from the list.



Select file for MoldCheck reference from the list.

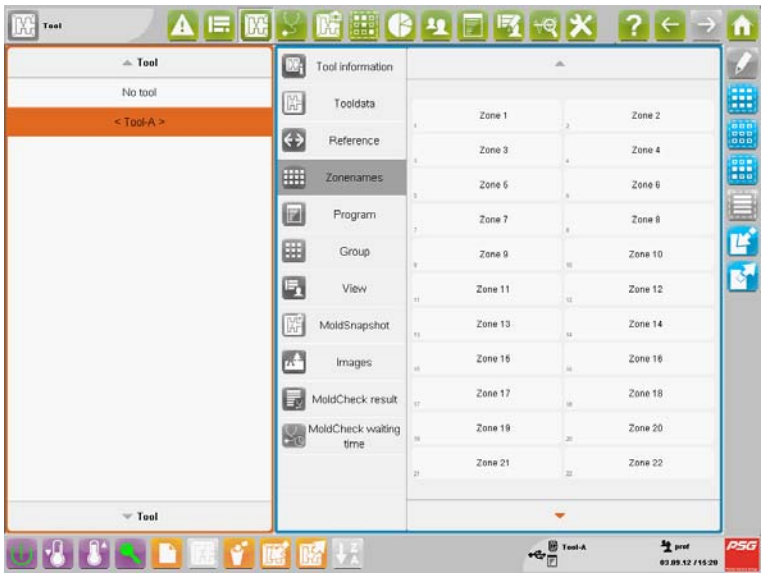


Example for a selection

8.4 Zone names

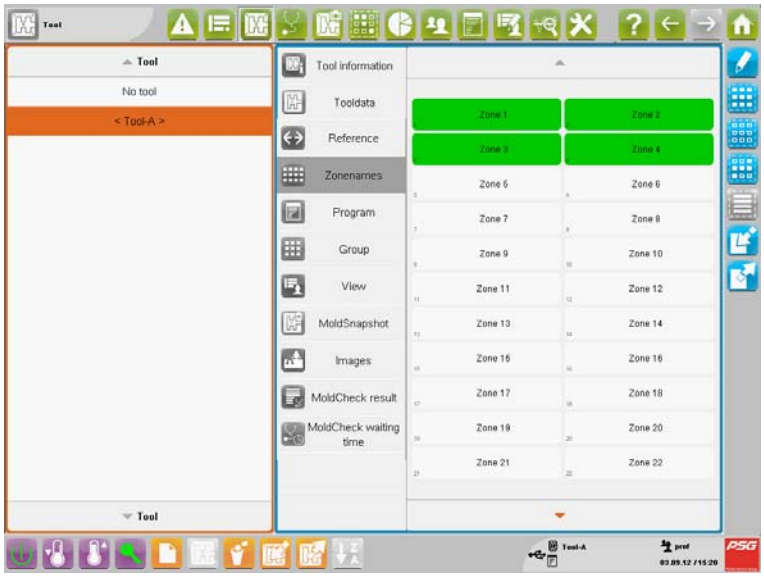
In standard, the zone names are specified by ZONE <CONSECUTIVE NUMBER>. The user can rename it, dependent on the tool and the application.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



The tool management is displayed, tool Tool-A is selected.

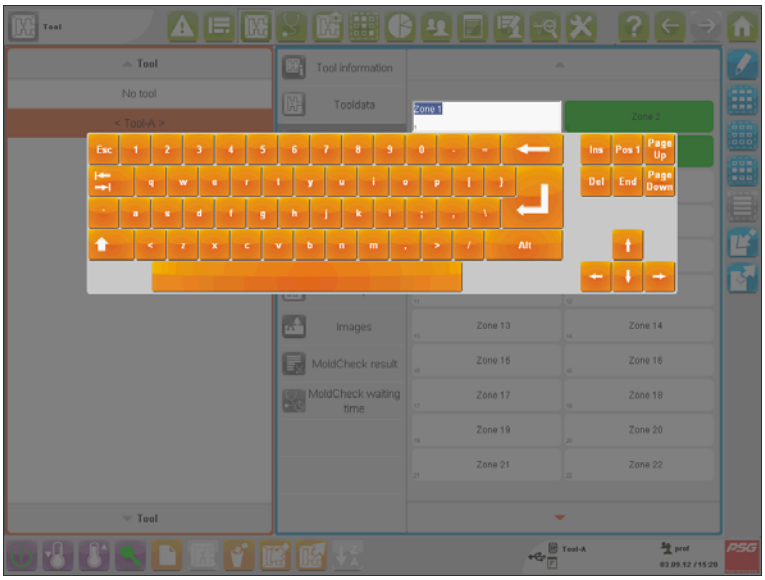
Select zone name.



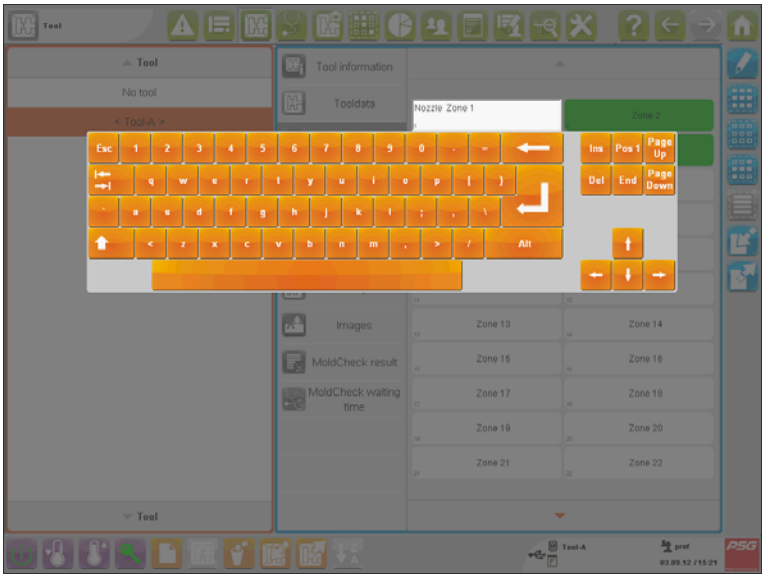
The zones 1-4 are selected.

Procedure to select zones see chapter ↗Zone selection.

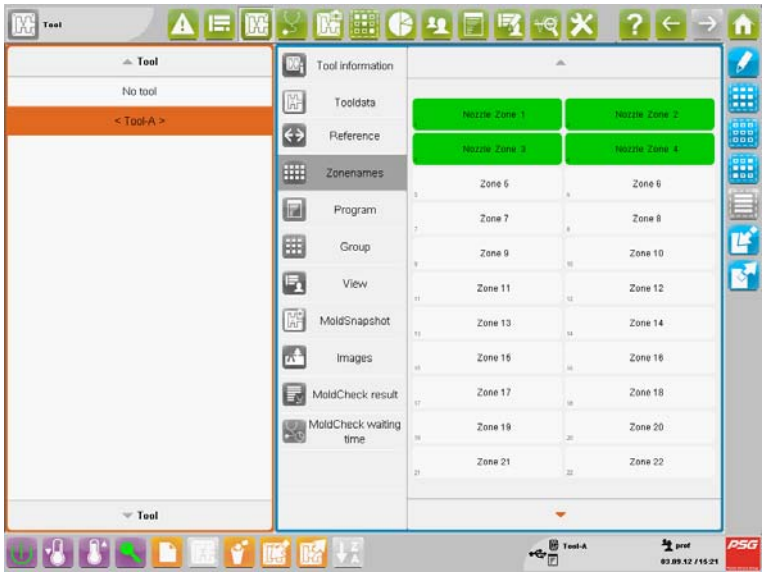
Press key



Keyboard is overlaid



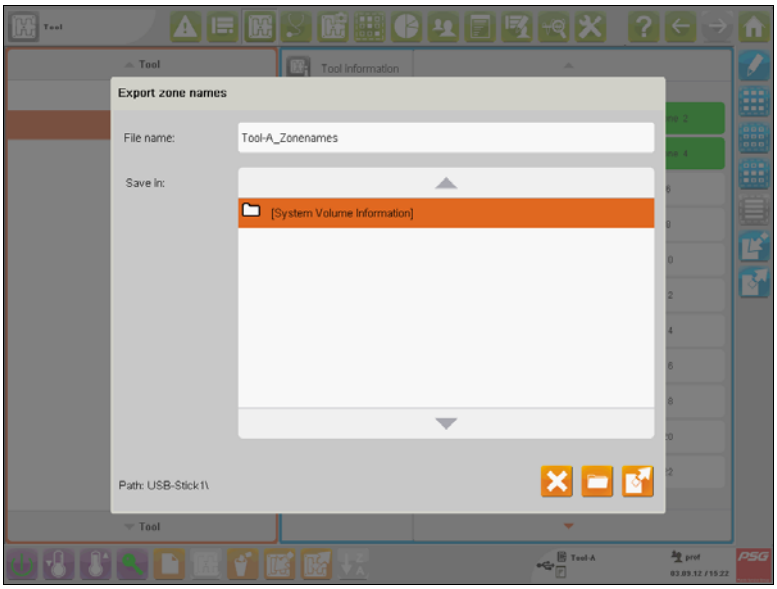
Enter the zone name using the visual keyboard



The zone names from zone 1-4 are changed

8.4.1 Export zone names

The zone names of a tool are exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown and the function is canceled.	
	Select tool on the left side, select zone names, press key. Should the default file name be changed, click into the field file name and change the file name by the visual keyboard.
Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate export	Press key

Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.

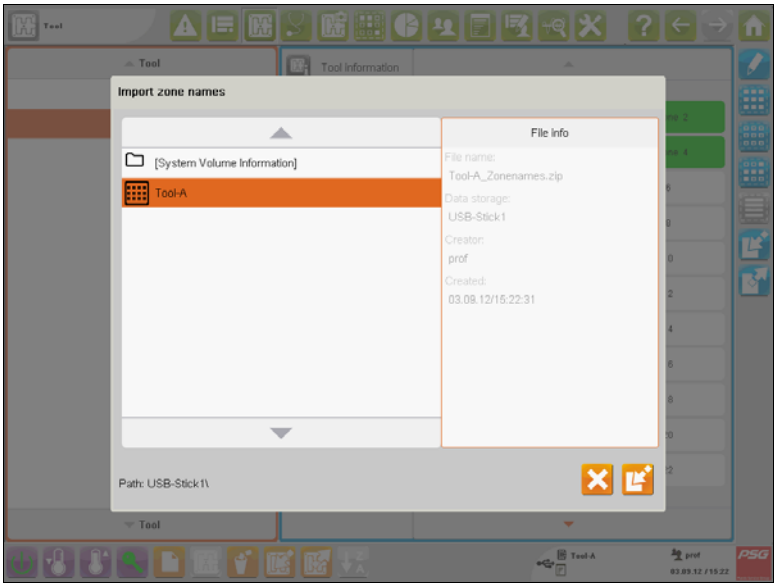
After completion of the dialogue, the status of the export is displayed.

8.4.2 Import zone names

The zone names of a tool are imported from a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown and the function is canceled.



Select tool, where the zone names should be imported, on the left side, press key.

Was a different file name, than the standard specified, note file info.

Cancel function — Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

Select a directory on the USB stick — Press key

or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate import after selection of file	Press key
Since only one file per tool is available in **TEMPSoft2**, the file is imported without any further confirmation.	
After completion of the dialogue, the status of the import is displayed.	

8.5 Program

A program in **TEMPSoft2** means a data set with all parameters of all zones of a hot runner controller.

The number of storable data sets is nearly unlimited. The programs support the customer at setting during often tool replacement and reduce the start-up phase.

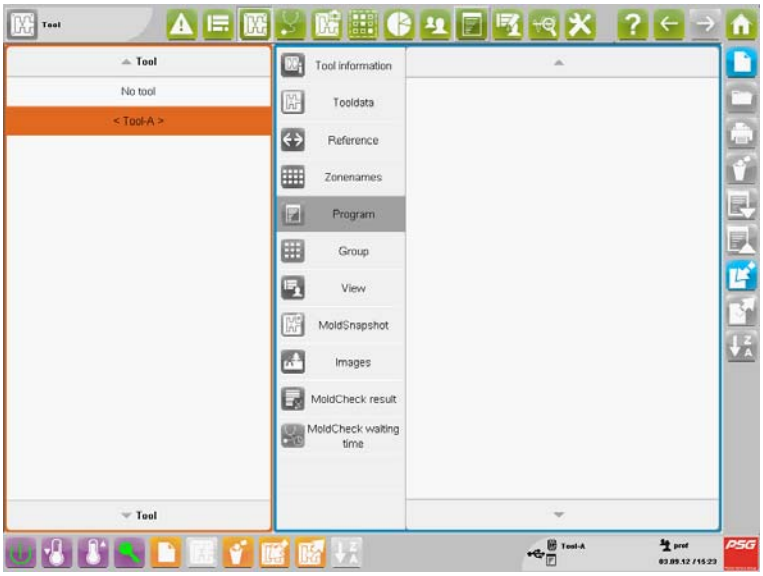
A Program can be

- newly created. Please set and check the parameters of all zones
- loaded from the hot runner controller. The program can be stored in **TEMPSoft2** unchanged or be manually adapted
- loaded into the hot runner controller, i.e. the hot runner controller takes the setting of the parameters out of the program
- deleted

8.5.1 Create a new program

At creation of a new program, the parameters of all zones are initialized with standard values. The user has to customize the parameters according to his application.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

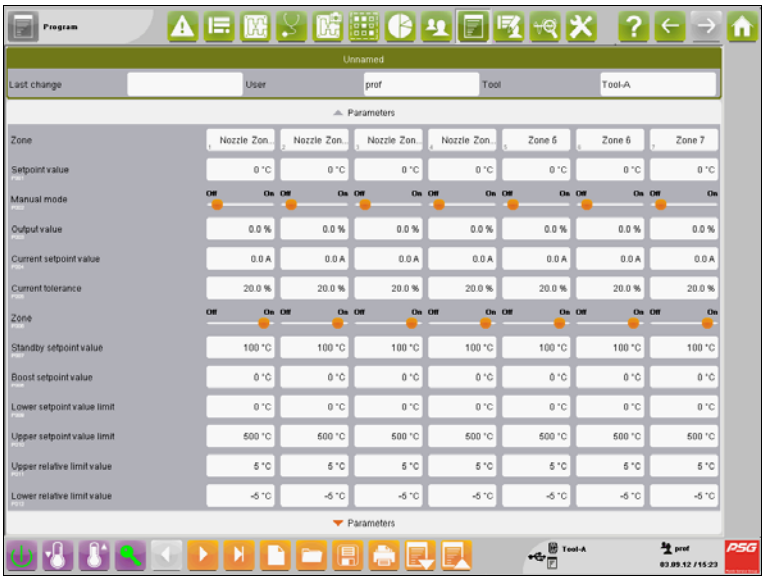


The tool management is displayed, tool Tool-A is selected.

Select program.

The following examples are based on see chapter ↗TEMPSoft2 Setting - Program settings ↗Input Mode = Decade switch

Press key



In the program the parameter view is shown.

Scroll zones forward

Navigation keys (see chapter ↗Views)

For the zone 1-6 the setpoint value is set to 100 °C

Click into an arbitrary setpoint value field to open the zone selection field.

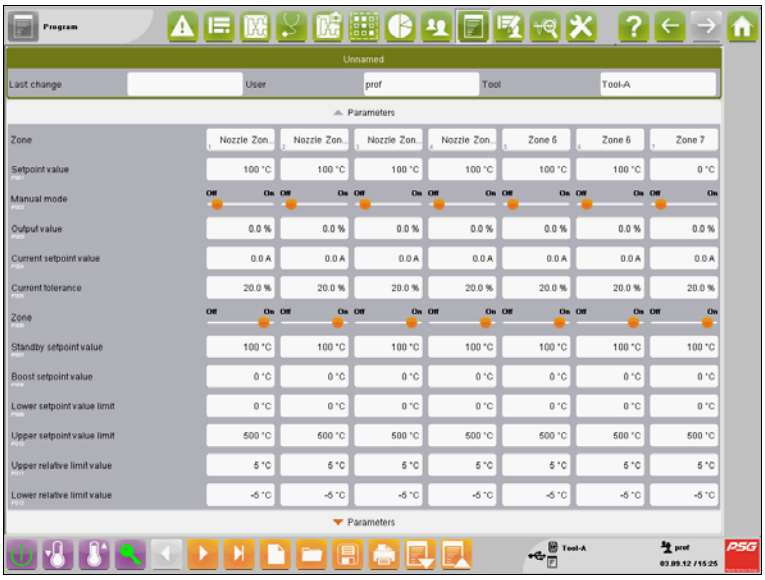
Select zone 1-6.

Procedure to select zones see chapter ↗Zone selection.

Set numerical value to 100

Change numerical values by up/down key

Confirm

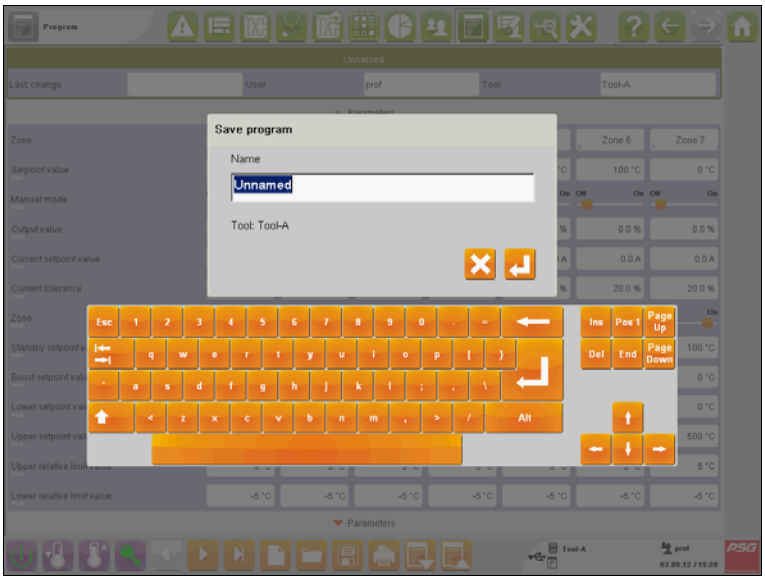


For the zone 1-6 the setpoint value is set to 100 °C

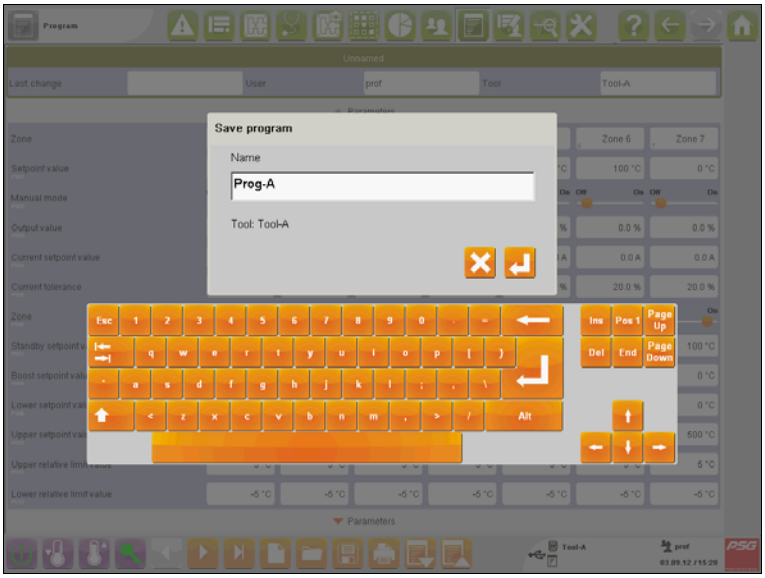
In the program further parameters, other zones can be selected. Proceed as previously described.

The program is stored with the name Prog-A

Press key

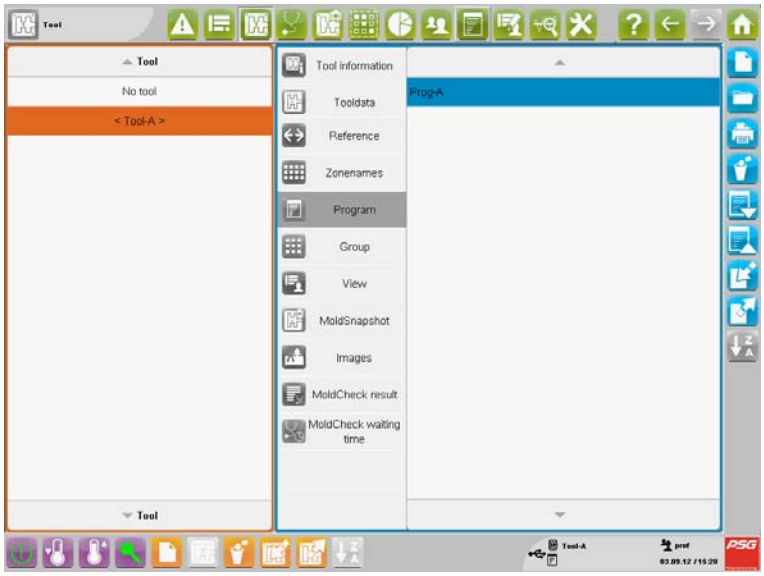


Keyboard is overlaid



Enter the name **Prog-A** using the visual keyboard

Confirm

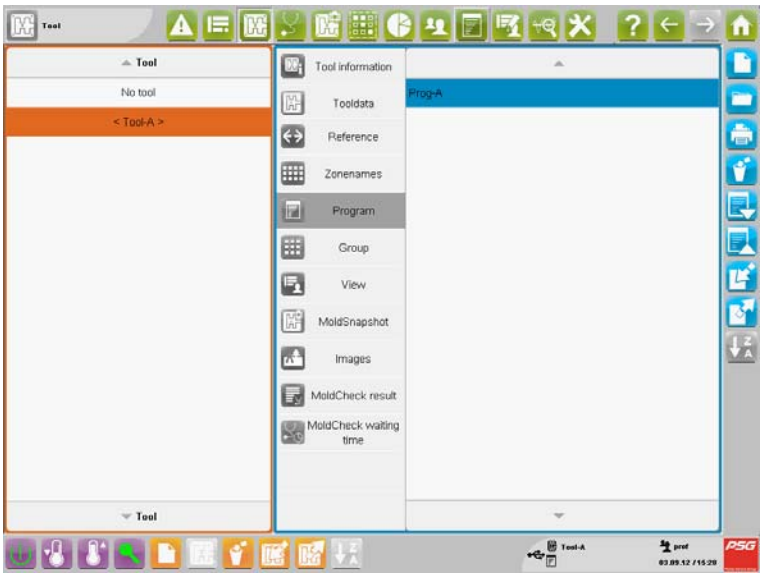


The program with the name Prog-A is created

8.5.2 Load program with data from the hot runner controller

To reuse parameters, already set for a special application and a special tool, the parameters set can be read out of the hot runner controller.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



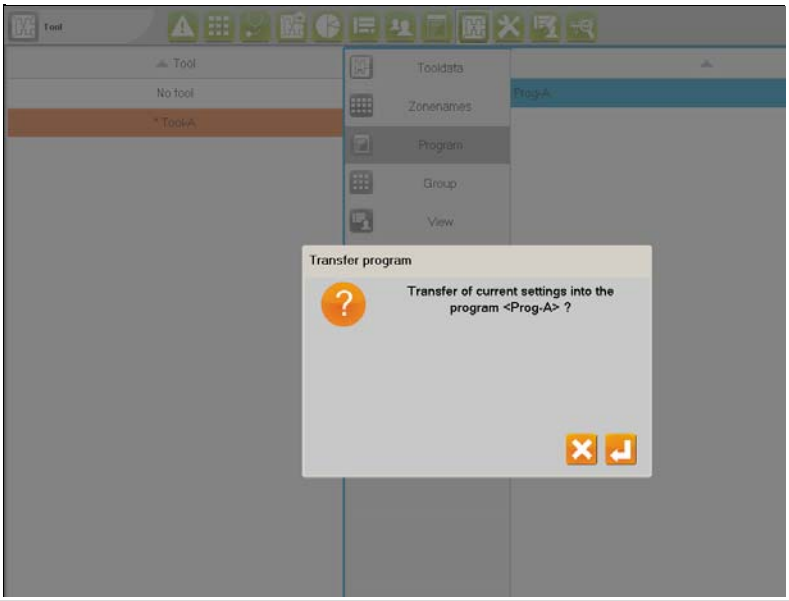
The tool management is displayed, tool Tool-A is selected.

Select program.

Either ...

import parameters from the hot runner controller into the selected program Prog-A

Press key

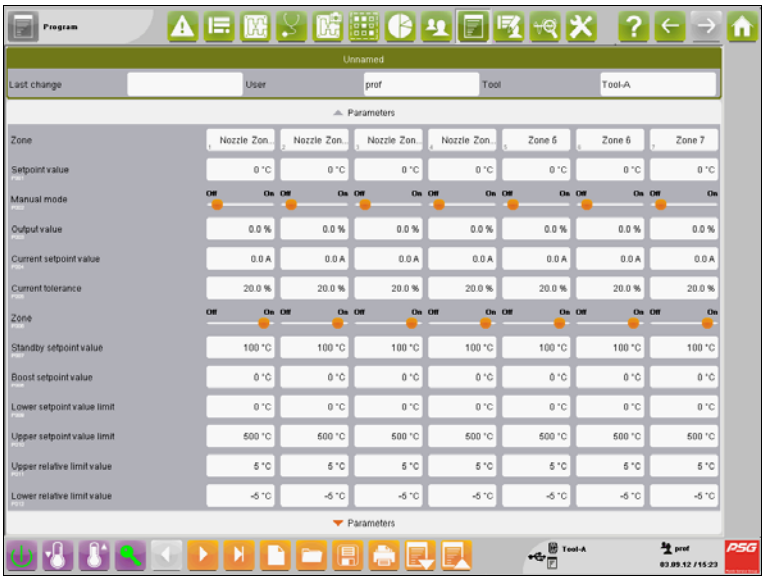


Confirm

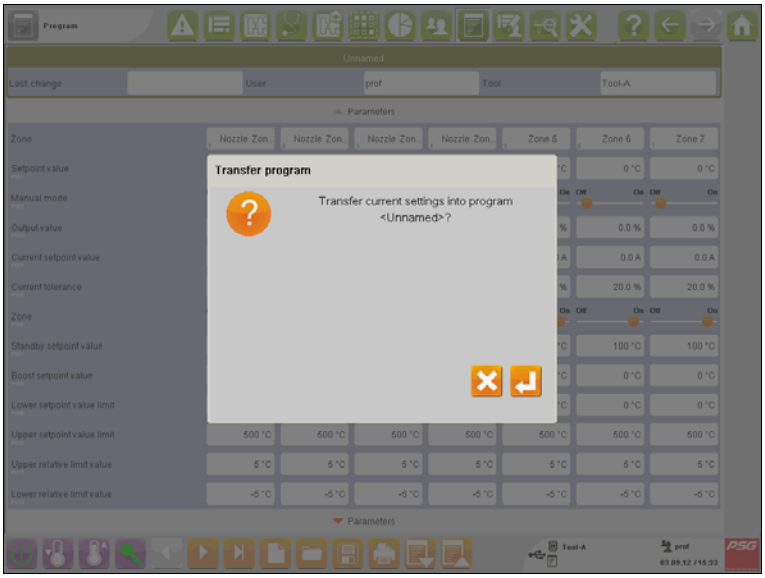
... Or

import parameters from the hot runner controller into a new program

Press key



Press key



Press key

8.5.3 Create a new program (out of an existing)

At creation of a program, the parameters of all zones are initialized with standard values. The user has to customize the parameters according to his application.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

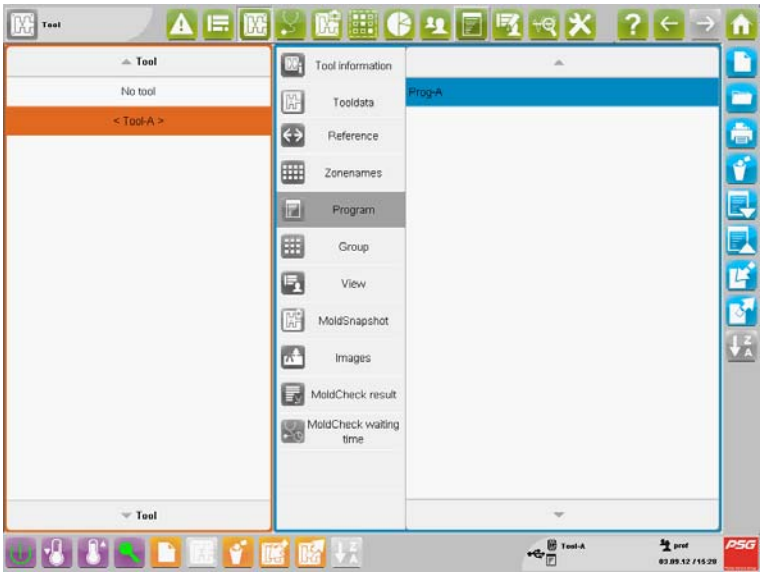
8.5.4 Open program

= Open a program

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Either ...

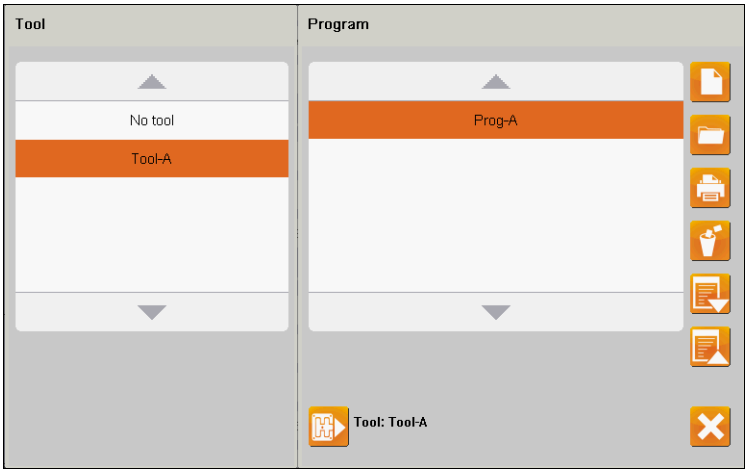
Select and open program in the tool management



Press key

... Or

Press key programs and the stored programs, for the tool, are presented in a list to open.



Select program in the list
Select tool

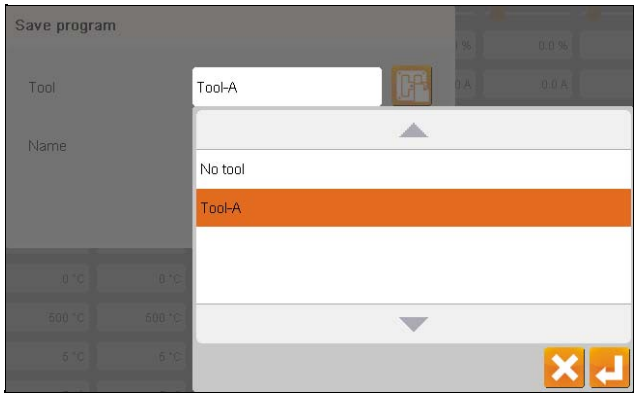
Press key

Open or reject

8.5.5 Save program

Save the program with name.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

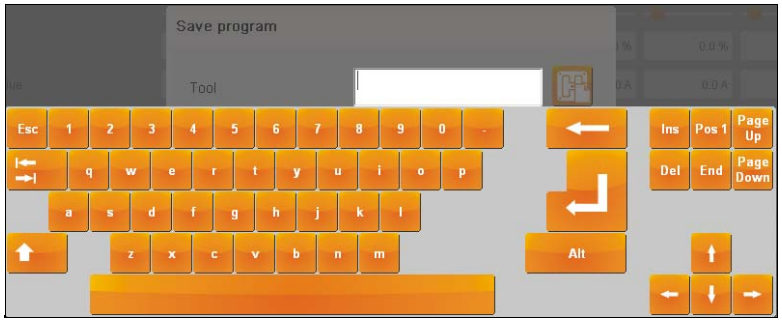


Store

...with **another** tool.

Select another tool.

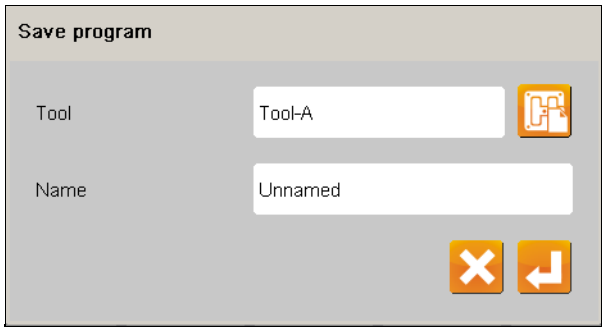
Confirm.



...with **a just created** tool.

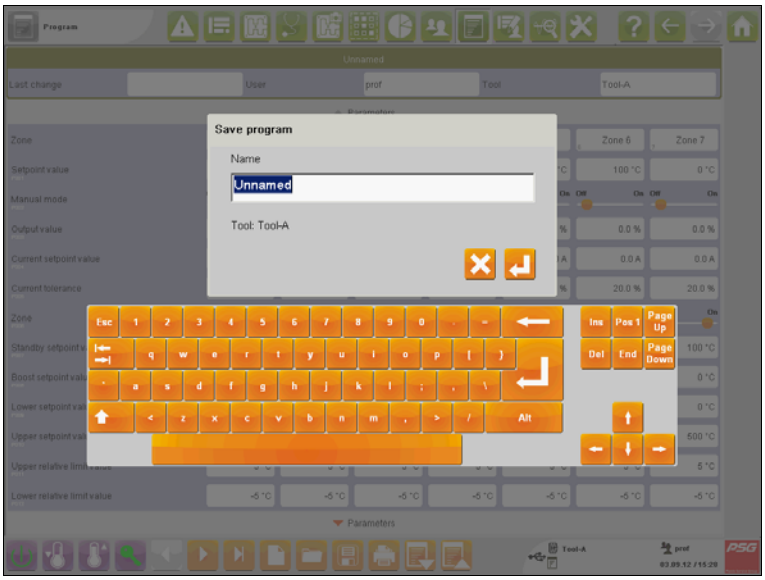
Enter the name of the new tool by using the visual keyboard

Confirm



...with the tool specified.

Select field NAME.



Keyboard is overlaid

Enter the name using the visual keyboard

Confirm

8.5.6 Activate program (load into the hot runner controller)

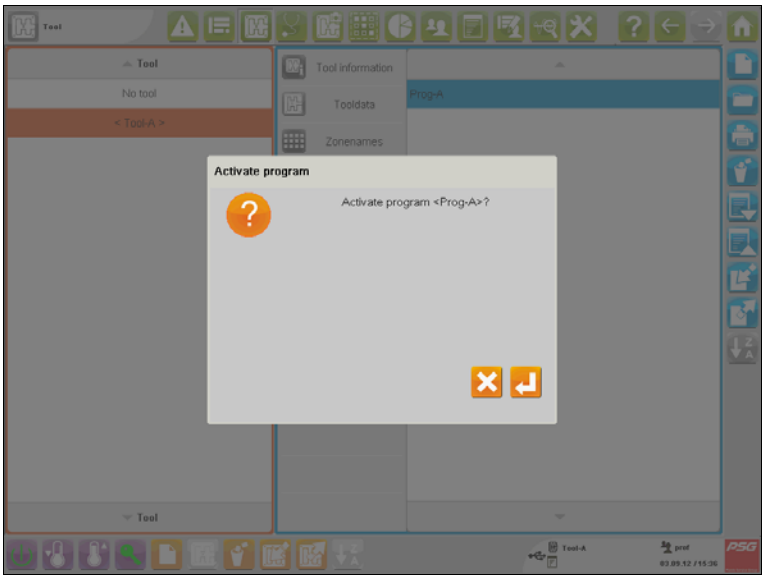
Load a program with the set parameters set for a special application and a special tool into the hot runner controller.

=

Load a program into the hot runner controller

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Either ...

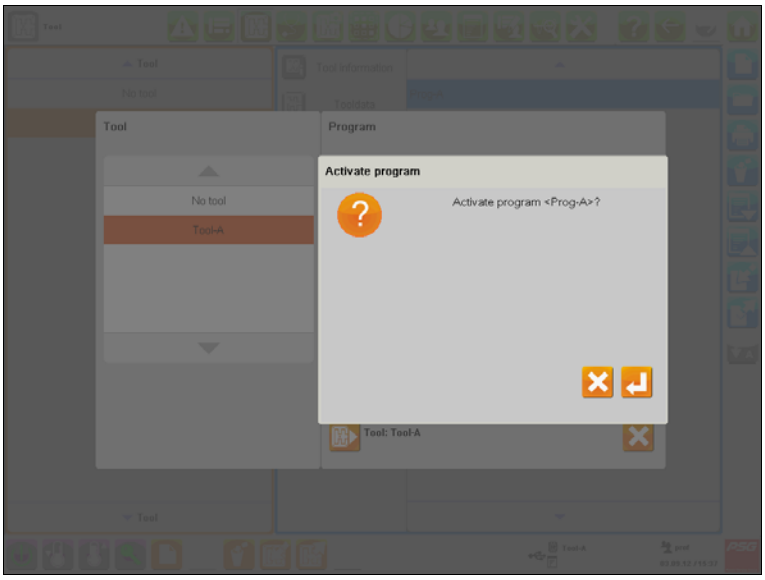


Select program

Press key

Confirm or reject

... Or



Press key

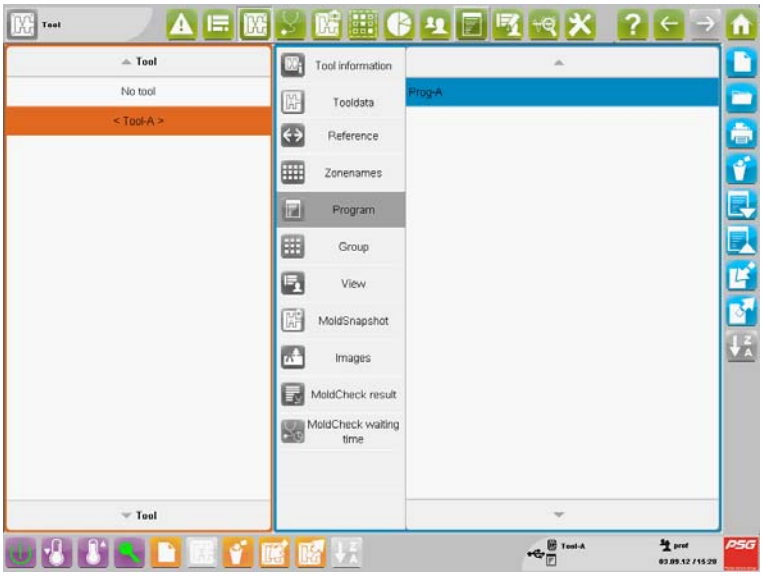
Confirm or reject

In the current settings (right down) the name of the currently active program is displayed. * in front of the name means, program was changed in **TEMPSoft2**.

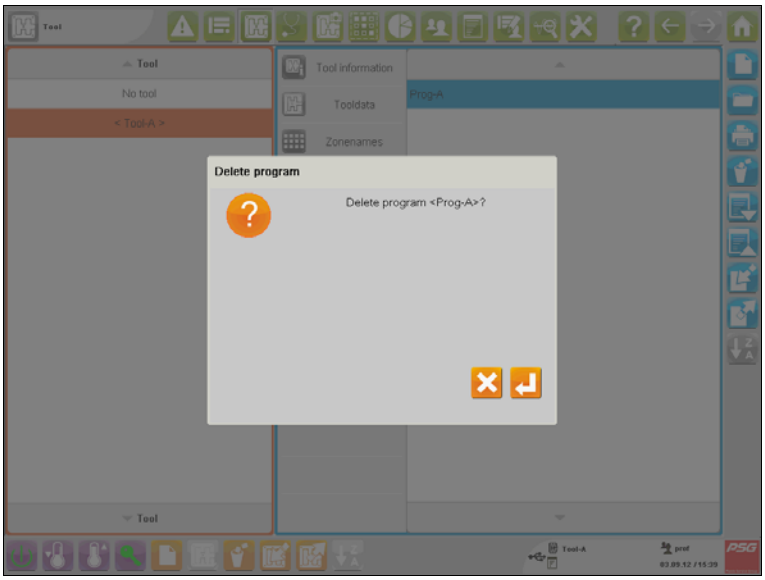
8.5.7 Delete program

Delete the selected program

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



Select program
Press key



Confirm or reject

8.5.8 Print program

= Print selected program

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

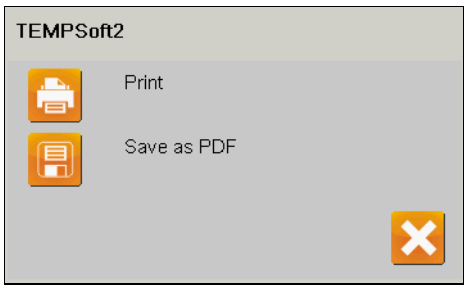
Press key

Dependent of printer setting

See Chapter↗Printer settings

Login as **admin**
See Chapter↗Login/Logout

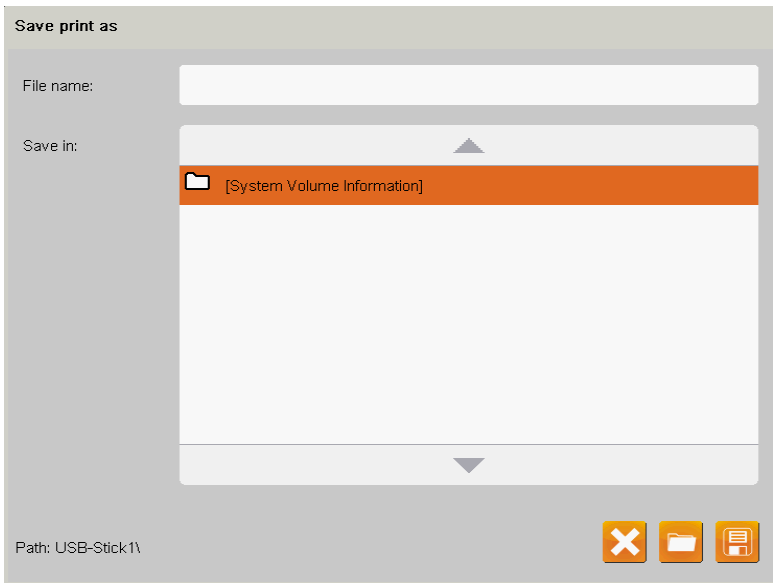
Is NO printer selected and no USB stick connected, a message is shown an the function is canceled.



PRINTER installed

Program is printed on this printer,

and/or stored as PDF file on USB stick.



NO printer selected and/or stored as PDF file on USB stick.

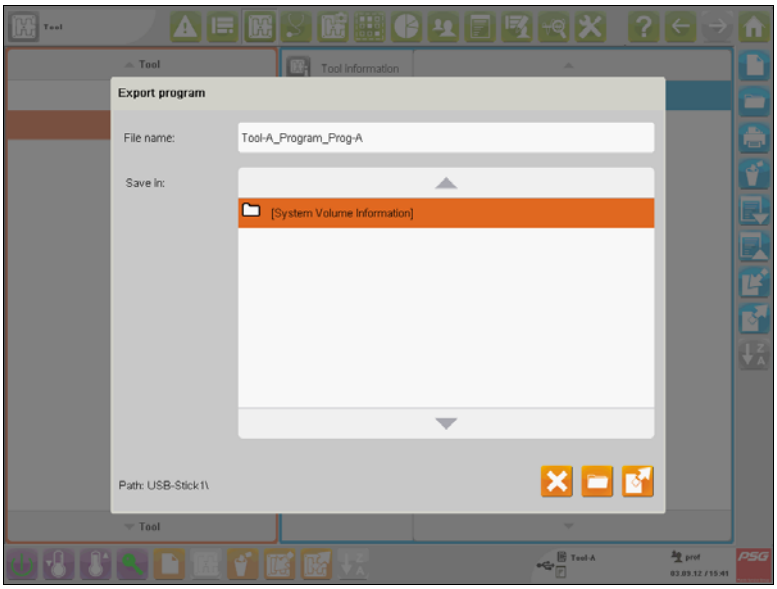
Program is stored as file on a USB stick with the here specified name (to change the name select the name field).

Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Start saving	Press key
After completion of the dialogue, the status of the save is displayed.	

8.5.9 Export program

The program of a tool is exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown and the function is canceled.	



Select tool on the left side, select program, press key.

Should the default file name be changed, click into the field file name and change the file name by the visual keyboard.

Cancel function

Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

Select a directory on the USB stick

Press key

or a directory on the USB stick by double click on

Return to previous directory by double click on

Activate export

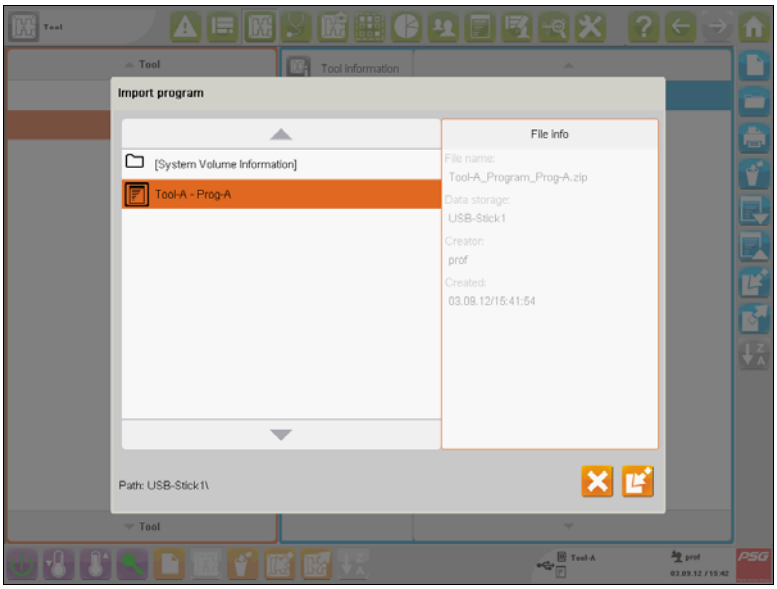
Press key

Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.

After completion of the dialogue, the status of the export is displayed.

8.5.10Import program

The program of a tool is imported from a connected USB stick.

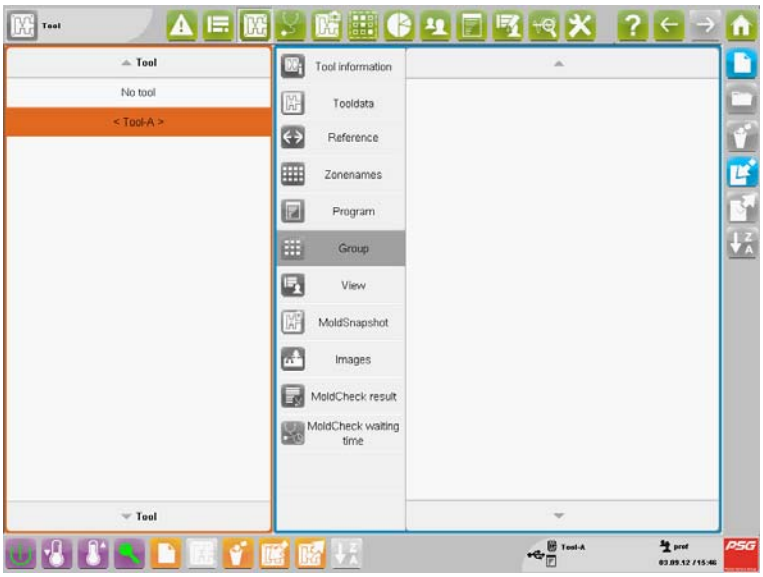
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown and the function is canceled.	
	Select tool, where the program should be imported, on the left side, press key.
Was a different file name, than the standard specified, note file info.	
Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	

Activate import after selection of file	Press key
Before import it is checked, whether there is already a file with the same name in **TEMPSoft2**. The file can be overwritten and/or imported with another name.	
After completion of the dialogue, the status of the import is displayed.	

8.6 Group

To simplify the selection, zones can previously be combined into groups. At ↗Zone selection, a group can be referenced and the zones included are displayed as selected in the zone field.

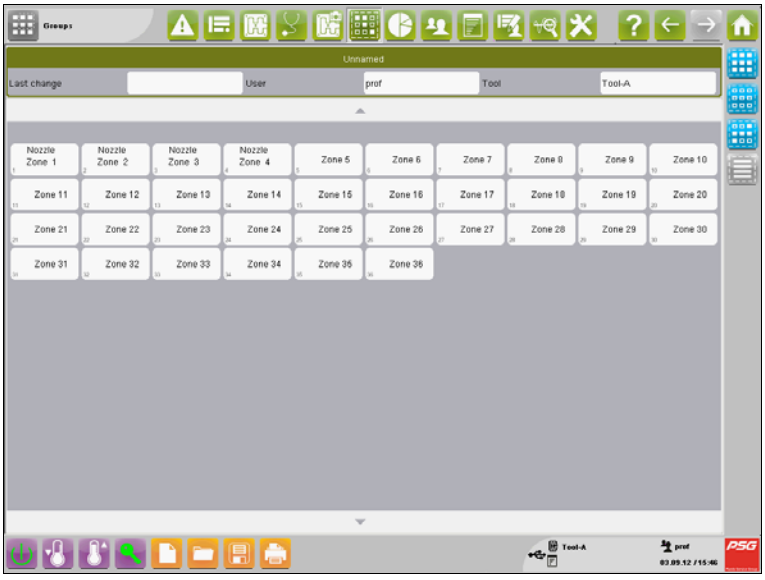
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



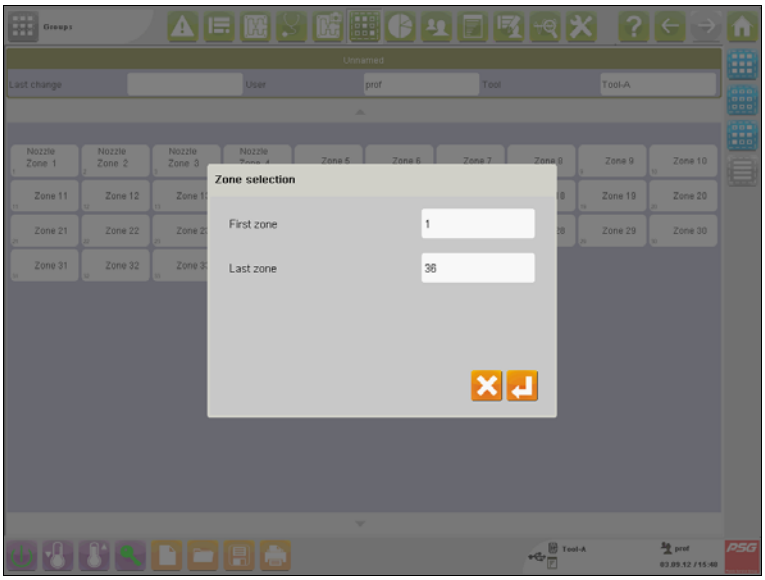
The tool management is displayed, tool Tool-A is selected.

Select group.

Press key



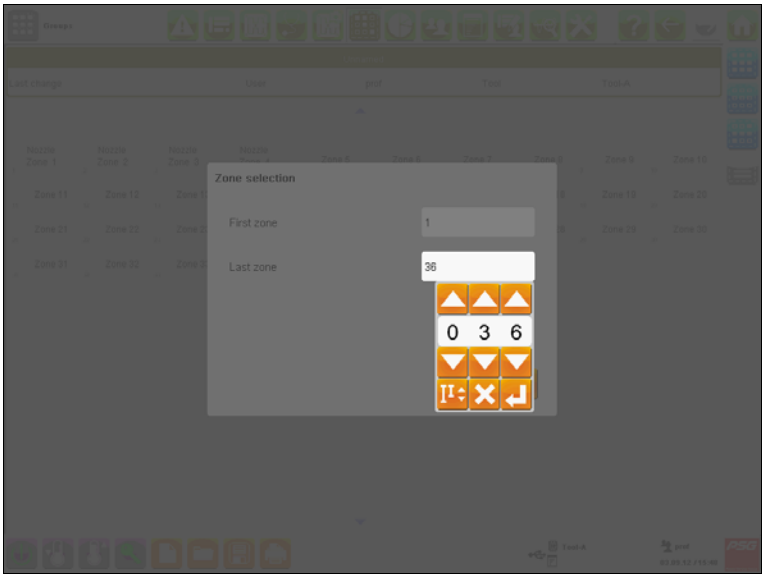
The zones are selected. Procedure to select zones see chapter ↗Zone selection.



Press key

Dialog box opens

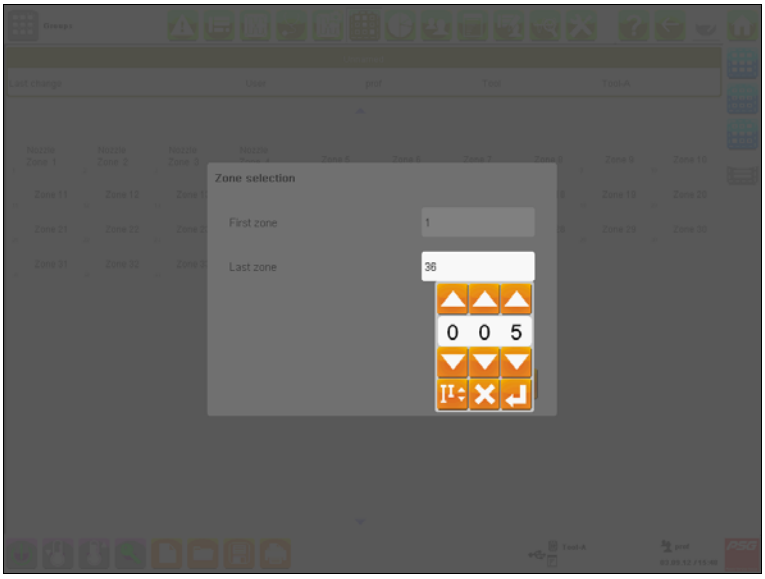
Zone selection first and last zone



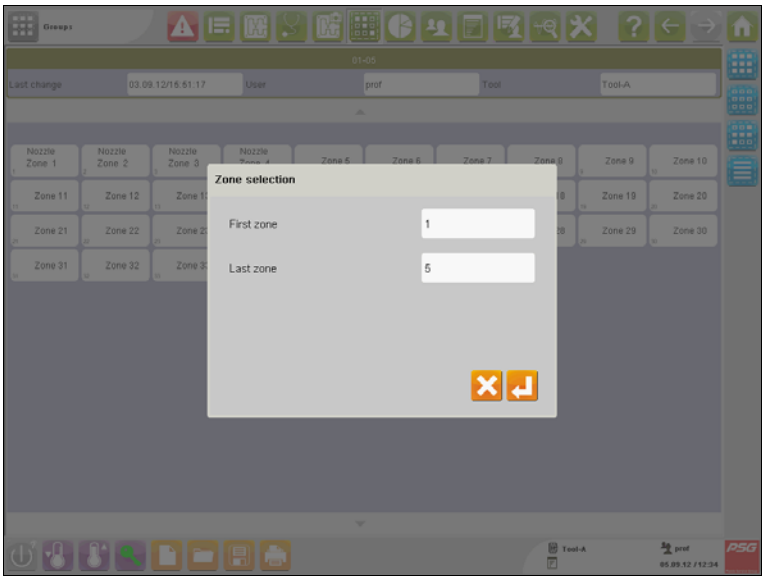
Select numerical box LAST ZONE

Input box opens

Change numerical values by up/down key



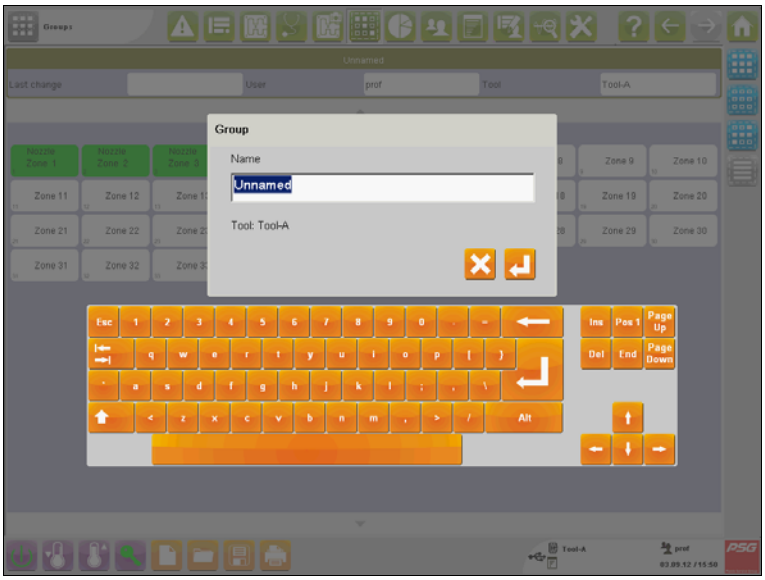
Set numerical value to 5



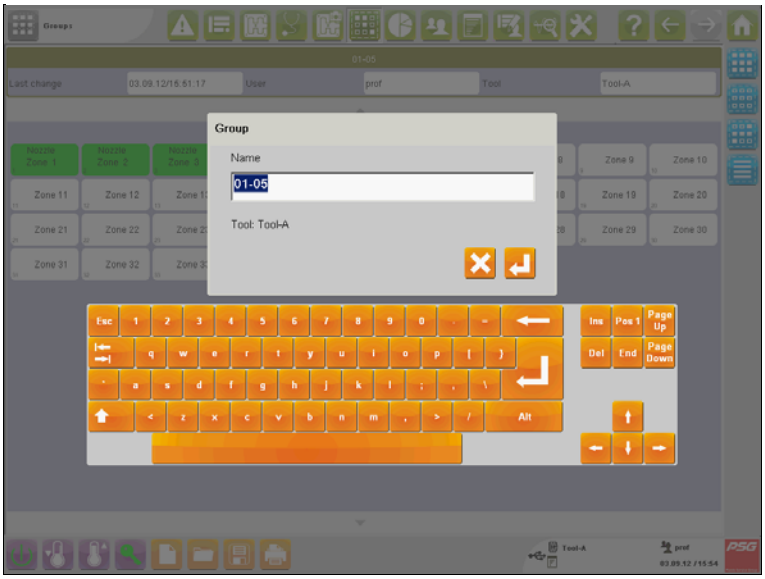
Confirm

The zones 1 to 5 are selected.

Press key



Keyboard is overlaid



Enter the group name **01-05** using the visual keyboard

Confirm

8.6.1 Create a new group (out of an existing)

Before working with a group, it must be defined first and created with a name.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

8.6.2 Open group

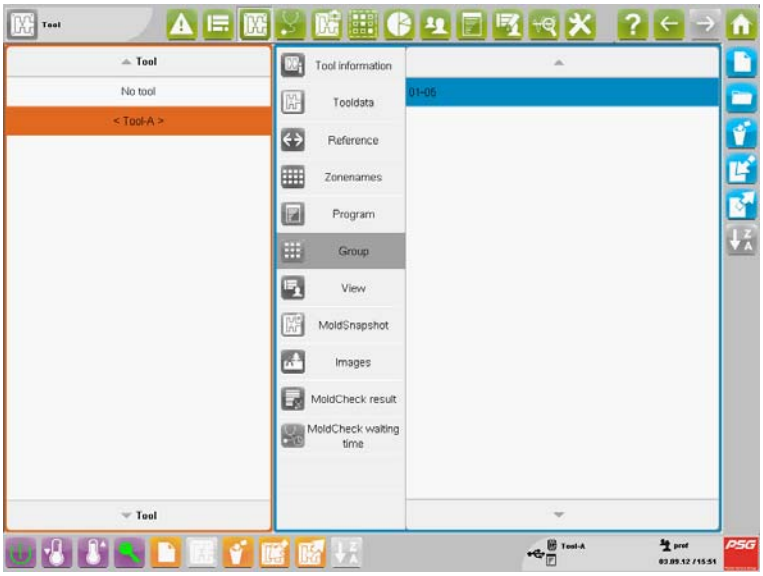
=

Open a group

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Either ...

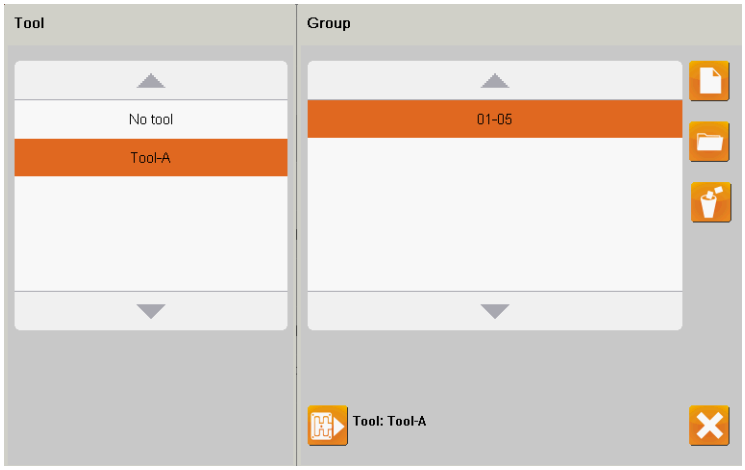
Select and open group in the tool management



Press key

... Or

Press key groups and the stored groups, for the tool, are presented in a list to open.



Select group in the list
Select tool

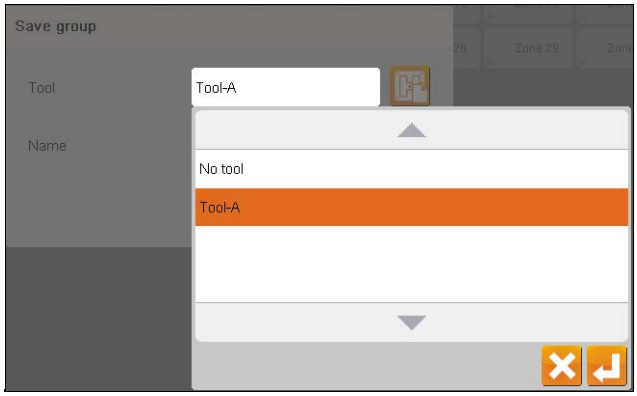
Press key

Open or reject

8.6.3 Save group

Save the group with name.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

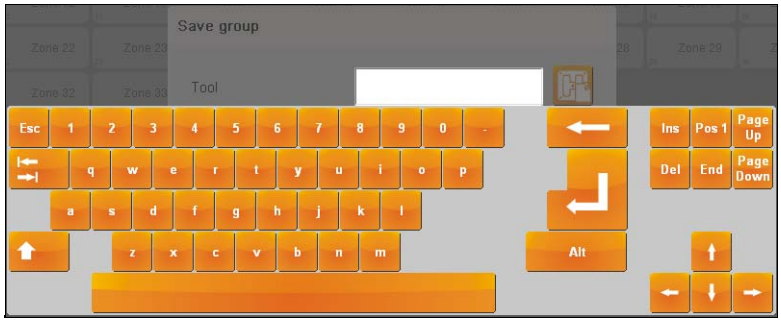


Store

...with **another** tool.

Select another tool.

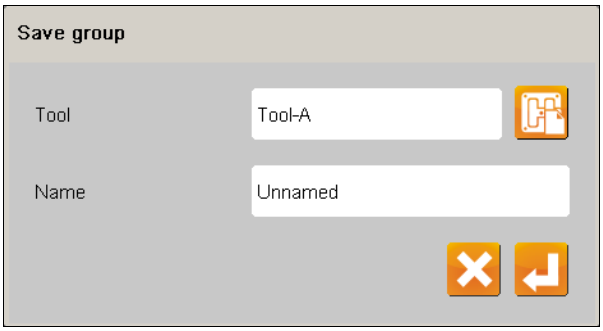
Confirm.



...with **a just created** tool.

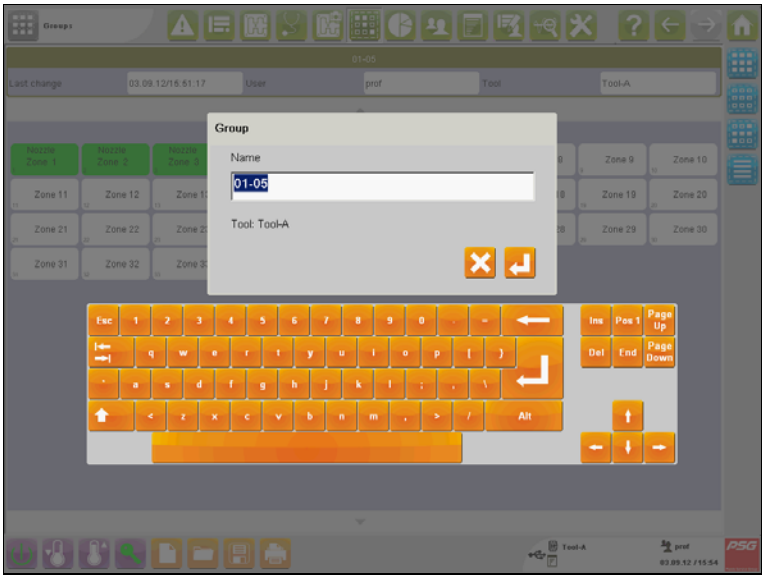
Enter the name of the new tool by using the visual keyboard

Confirm



...with the tool specified.

Select field NAME.



Press key

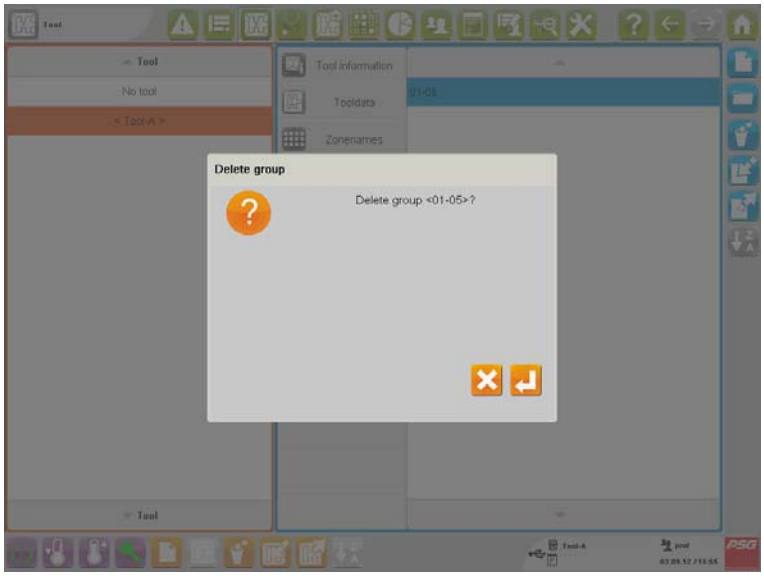
Enter the name using the visual keyboard

Confirm

8.6.4 Deleting group

Delete the selected group.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



Press key

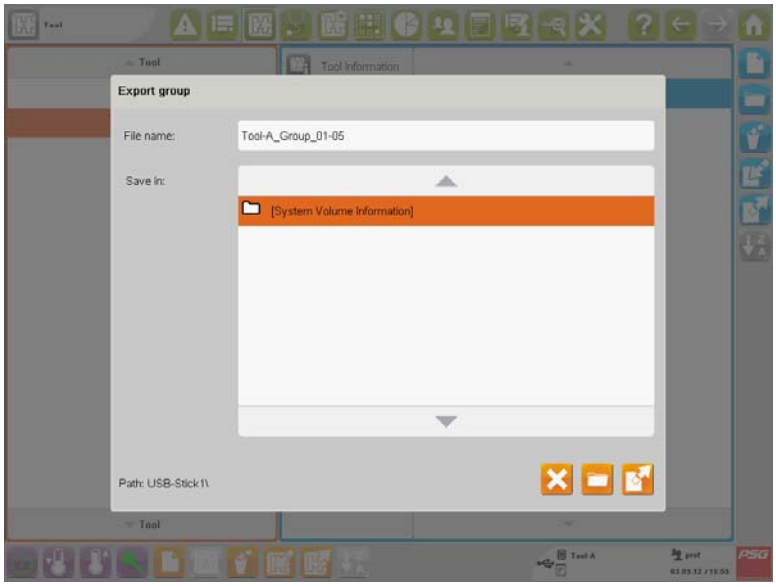
Confirm or reject

8.6.5 Export group

The group of a tool is exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown and the function is canceled.



Select tool on the left side, select group, press key.

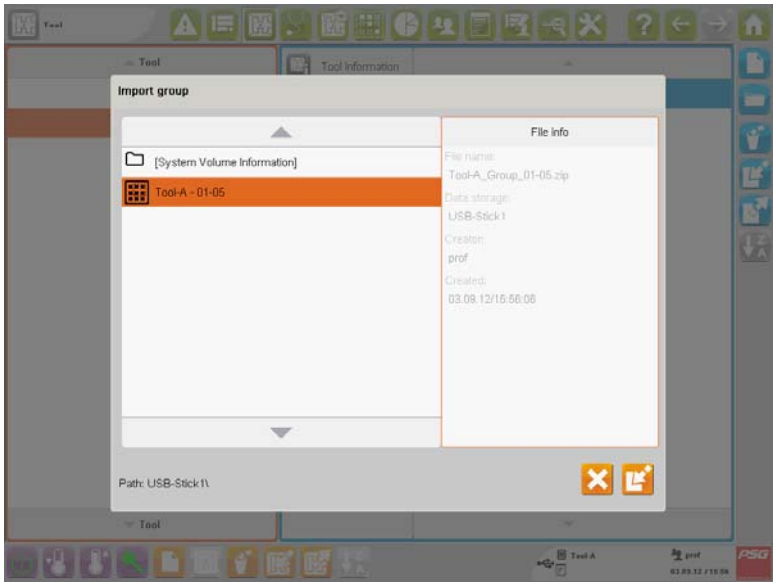
Should the default file name be changed, click into the field file name and change the file name by the visual keyboard.

Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate export	Press key
Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.	
After completion of the dialogue, the status of the export is displayed.	

8.6.6 Import group

The group of a tool is imported from a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown and the function is canceled.	



Select tool, where the group should be imported, on the left side, press key.

Was a different file name, than the standard specified, note file info.	
Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	

Activate import after selection of file	Press key
Before import it is checked, whether there is already a file with the same name in **TEMPSoft2**. The file can be overwritten and/or imported with another name.	
After completion of the dialogue, the status of the import is displayed.	

8.7 View

For simple handling with hot runner control systems, the user defined views are integrated **TEMPSoft2 .**
A user defined view offers by a drawing area

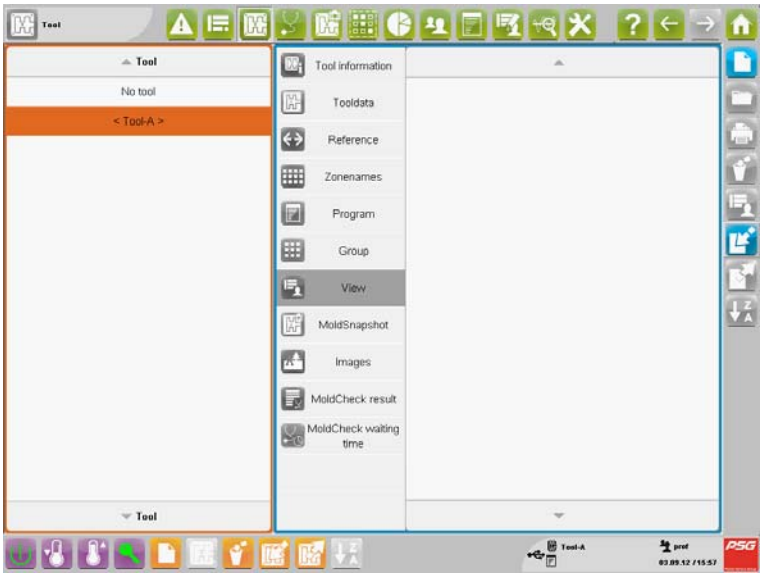
- Images
- Texts
- Zones
- Difference bar charts
- Parameters
- Selection points/Links
- Lines

to combine in an easy way, and so to present the process in an appropriate form graphically.
The user defined views can quite easily be created or changed with the available functions in **TEMPSoft2**.

8.7.1 Create a new view

The user gets an empty drawing area, which he may fill with any picture element.

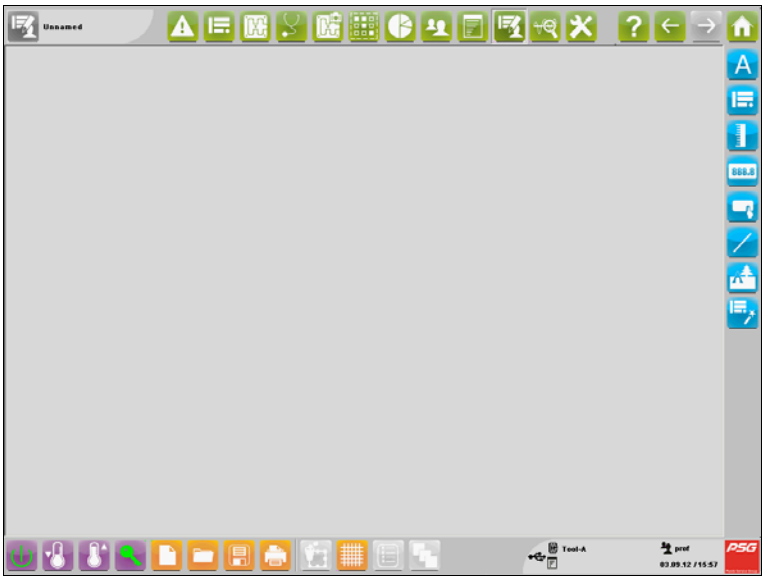
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



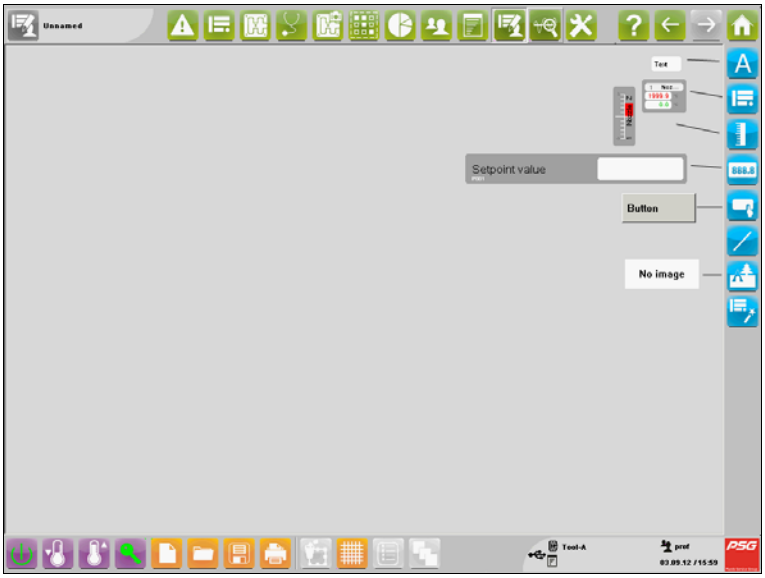
The tool management is displayed, tool Tool-A is selected.

Select view.

Press key



The drawing area is displayed



Press key

Click in drawing area

Picture element is created

All picture elements are created with standard configuration. Each picture element can be selected in the drawing area after creation, to modify the standard setting.

See also selection of picture element and

By the shape handles the selected picture element may be

- zoomed in
- zoomed out
- moved

werden.

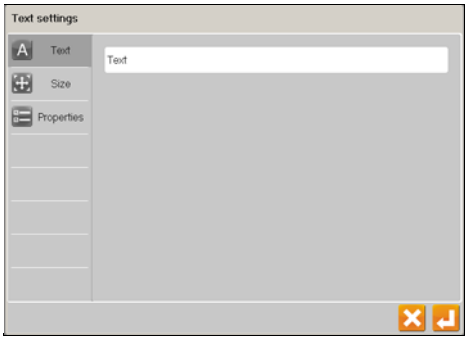
Delete selected picture element

Show/hide grid

Picture elements align with the upper left corner to the grid when displayed.

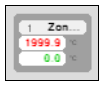
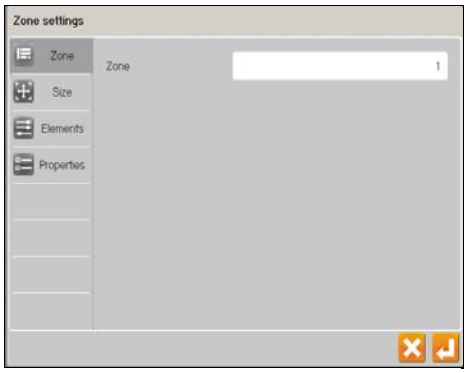
Show settings for picture element (like double click on picture element)	See above
Are more picture elements lying over each other, their order can be changed.	

8.7.1.1 Picture element Text

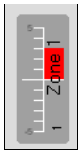
Create picture element **Text**	Press key Click in drawing area
Change picture element	Double click on picture element in drawing area
	Change standard setting for picture element
User-defined text (max. 200 characters)	Text
Anchor coordinates, width/height, zoom value, aspect ratio	Size
Transparent background, background color	Properties

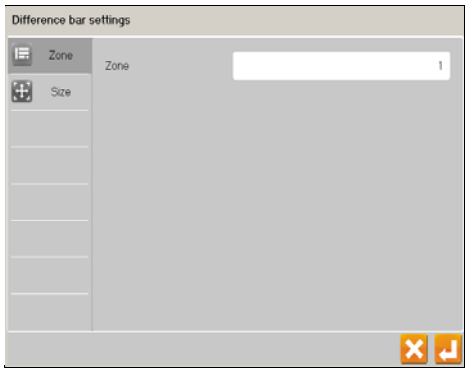
8.7.1.2 Picture element Zone

Create picture element **Zone**	Press key Click in drawing area

Change picture element		Double click on picture element in drawing area
		Change standard setting for picture element
Number of zone		Zone
Anchor coordinates, width/height, zoom value, aspect ratio		Size
Zone text, actual value1), setpoint value1), output value1), current1), bar 1) Standard parameter		Elements
Transparent background, background color, use user-defined parameters		Properties
Properties setting - Use user-defined parameters = ON: Now other parameters than standard parameters1) (actual value, setpoint value, output value, current) can be displayed by elements.		

8.7.1.3 Picture element Bar

Create picture element **Bar**		Press key Click in drawing area
Change picture element		Double click on picture element in drawing area

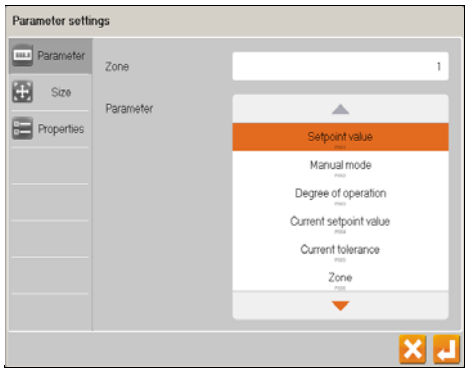


Change standard setting for picture element

Number of zone	Zone
Anchor coordinates, width/height, zoom value, aspect ratio	Size

8.7.1.4 Picture element Parameter

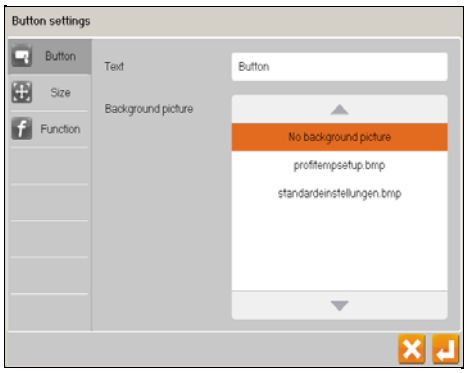
Create picture element **Parameter**	Press key 888.8 Click in drawing area
Change picture element	Double click on picture element in drawing area



Change standard setting for picture element

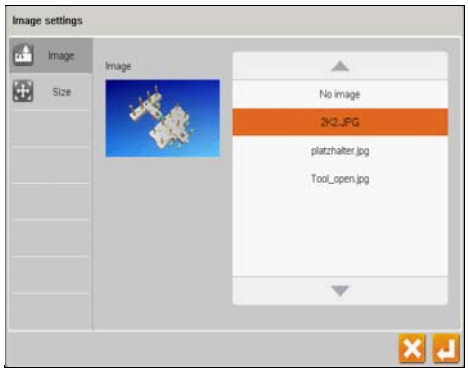
Number of Zone, parameter from list of value	888.8 Parameters
Anchor coordinates, width/height, zoom value, aspect ratio	Size
Parameter editable, show text	Properties

8.7.1.5 Picture element Button

Create picture element **Button**		Press key Click in drawing area
Change picture element		Double click on picture element in drawing area
		Change standard setting for picture element. The selected pictures are shown in a preview.
Text, background picture from list of value		Button (Selection/Link)
		Image import see chapter ↗Images
Anchor coordinates, width/height, zoom value, aspect ratio		Size
Selection of function from list of value		Properties

8.7.1.6 Picture element Picture

Create picture element **Picture**		Press key Click in drawing area
Change picture element		Double click on picture element in drawing area



Change standard setting for picture element.
The selected pictures are shown in a preview.

Picture from list of value	Picture
	Image import see chapter ↗Images
Angle, anchor coordinates, width/height, zoom value	Size
Expand the selected picture to the entire drawing area	

8.7.1.7 Zone wizard

To create quickly a customer view in which only the zones are displayed, use the zone wizard. Call function - select zones - specify zone type (normal or detail) - save view under a name.

8.7.2 Create a new view (out of an existing)

An empty drawing area is created.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

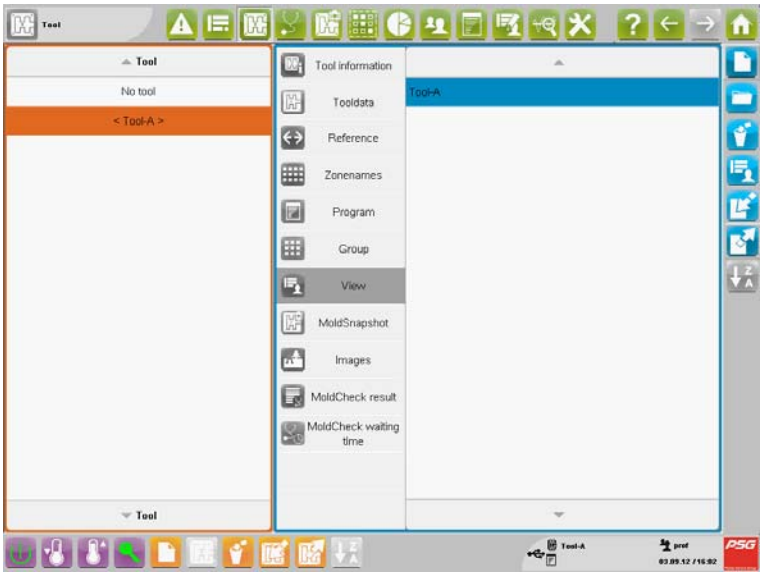
8.7.3 Open view

= Open a view

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Either ...

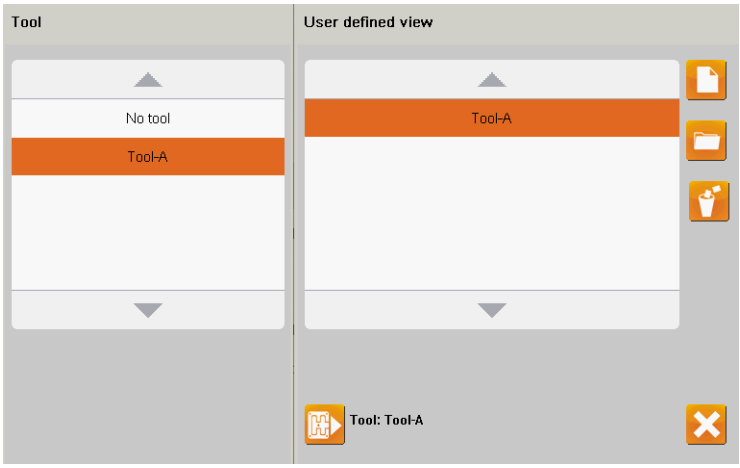
Select and open view in the tool management



Press key

... Or

Press key view and the stored views, for the tool, are presented in a list to open.



Select view in the list
Select tool

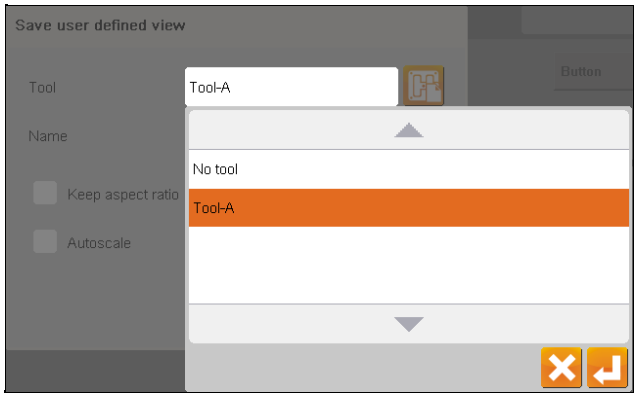
Press key

Open or reject

8.7.4 Save view

Save the view with name.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

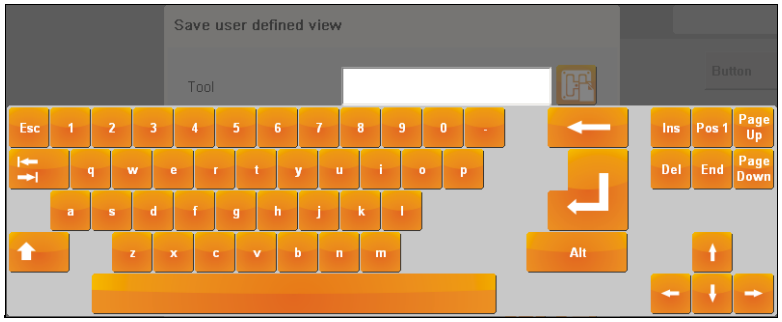


Store

...with **another** tool.

Select another tool.

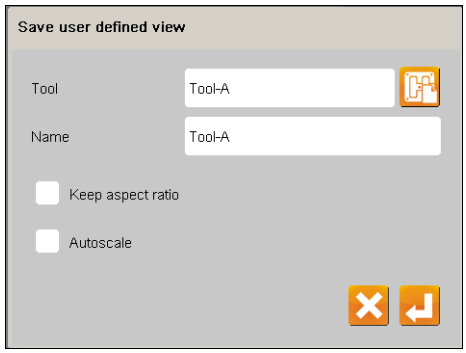
Confirm.



...with **a just created** tool.

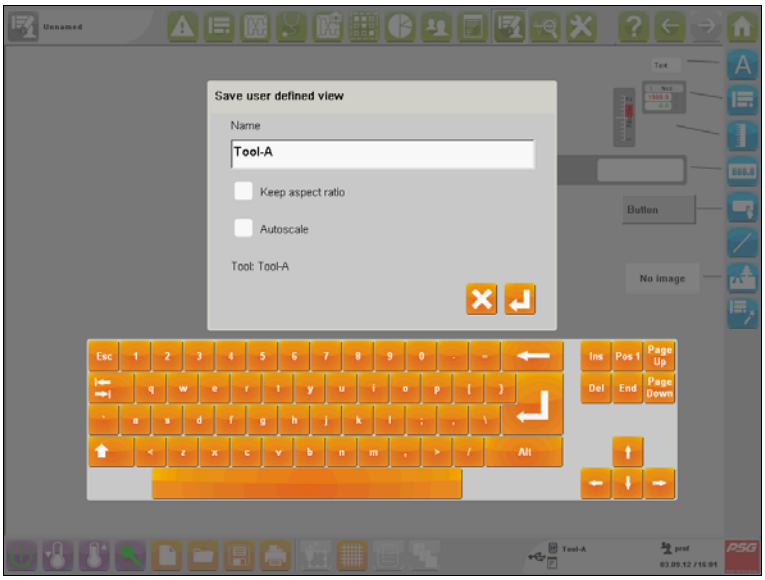
Enter the name of the new tool by using the visual keyboard

Confirm



...with the tool specified.

Select field NAME.



Press key

Enter the name using the visual keyboard

Confirm

Keep aspect ratio - User defined view without changes assumed.

Automatic scaling - User defined view adapted.

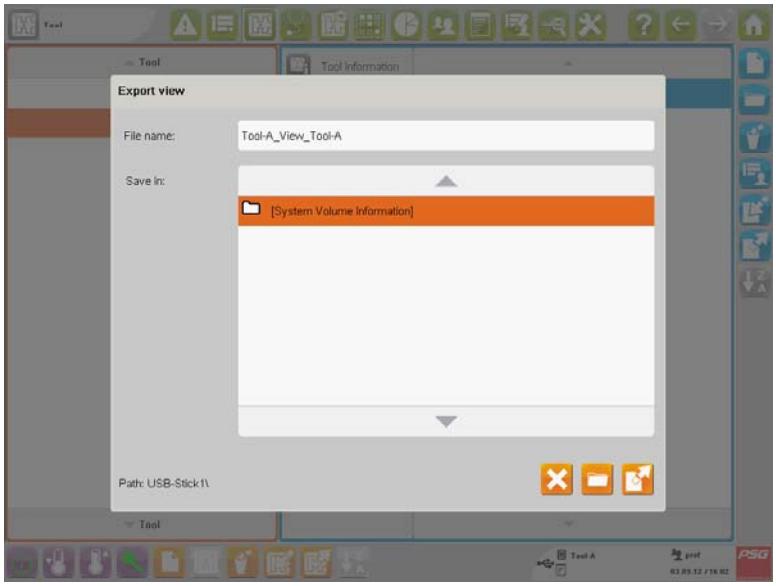
8.7.5 Display view

Display the selected view.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

8.7.6 Export view

The view of a tool is exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown an d the function is canceled.	
	Select tool on the left side, select view, press key Should the default file name be changed, click into the field file name and change the file name by the visual keyboard.
Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate export	Press key

Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.

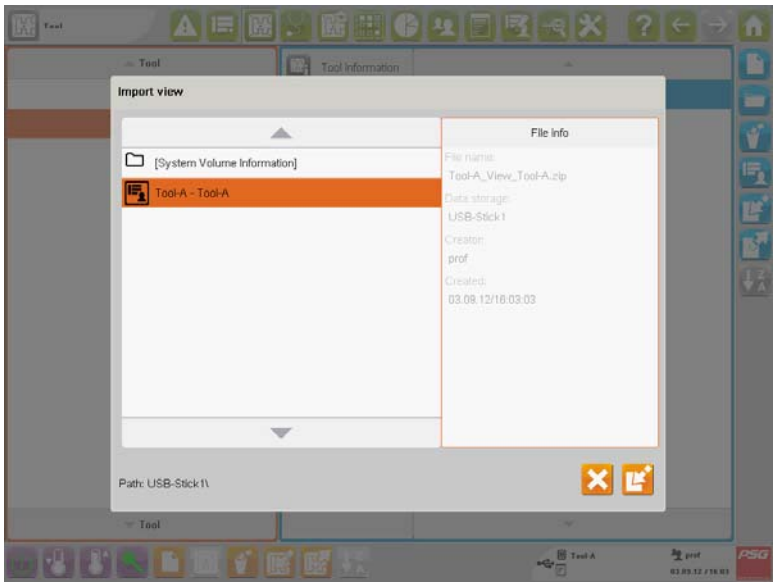
After completion of the dialogue, the status of the export is displayed.

8.7.7 Import view

The view of a tool is imported from a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown an d the function is canceled.



Select tool, where the view should be imported, on the left side, press key.

Was a different file name, than the standard specified, note file info.

Cancel function — Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

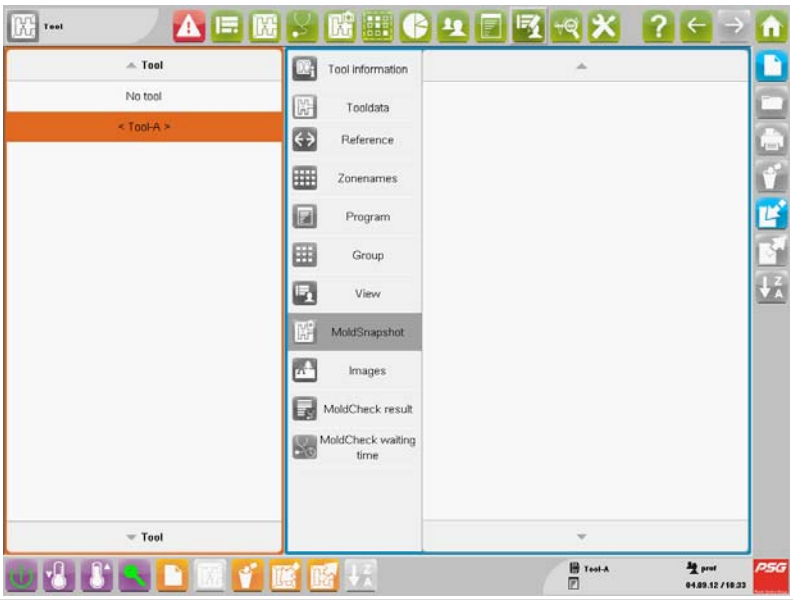
Select a directory on the USB stick — Press key

or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate import after selection of file	Press key
Before import it is checked, whether there is already a file with the same name in **TEMPSoft2**. The file can be overwritten and/or imported with another name.	
After completion of the dialogue, the status of the import is displayed.	

8.8 MoldSnapshot

A MoldSnapshot can be executed for the tool in the tool management. MoldSnapshot takes a snapshot of the state of the hot runner. Here are the most important process data like e.g. setpoint values, actual values, output values, heating currents and control parameters saved.

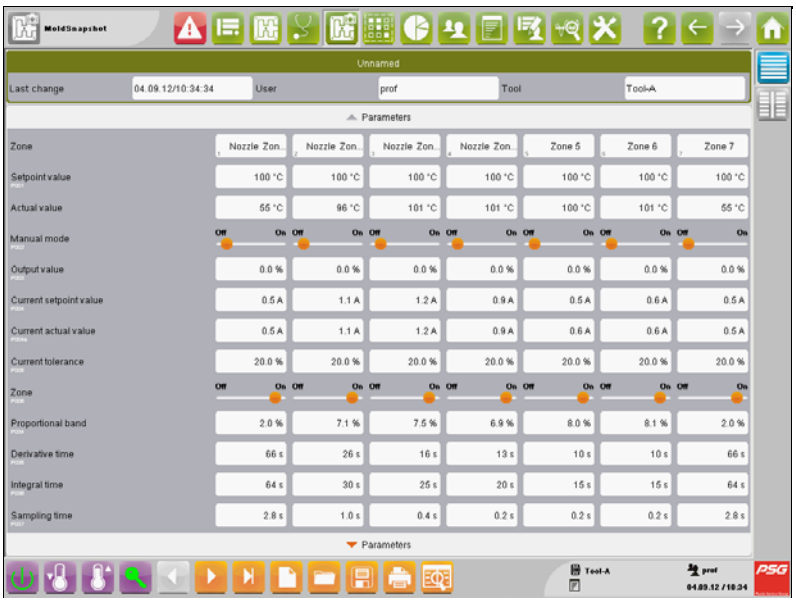
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



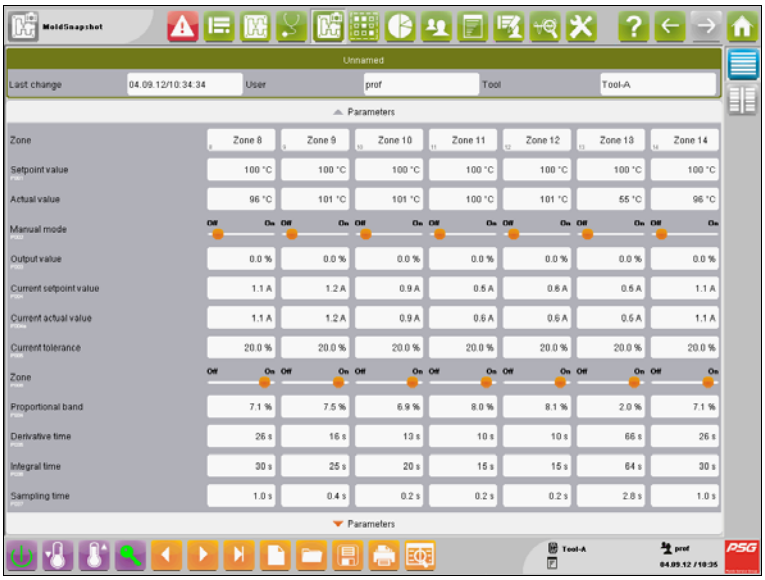
The tool management is displayed, tool Tool-A is selected.

Select MoldSnapshot.

Press key



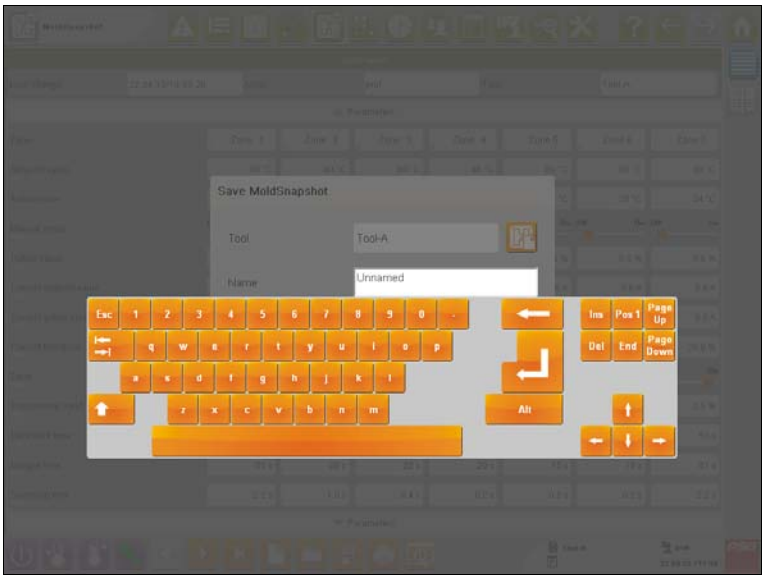
From the connected hot runner a snapshot for all zones is made



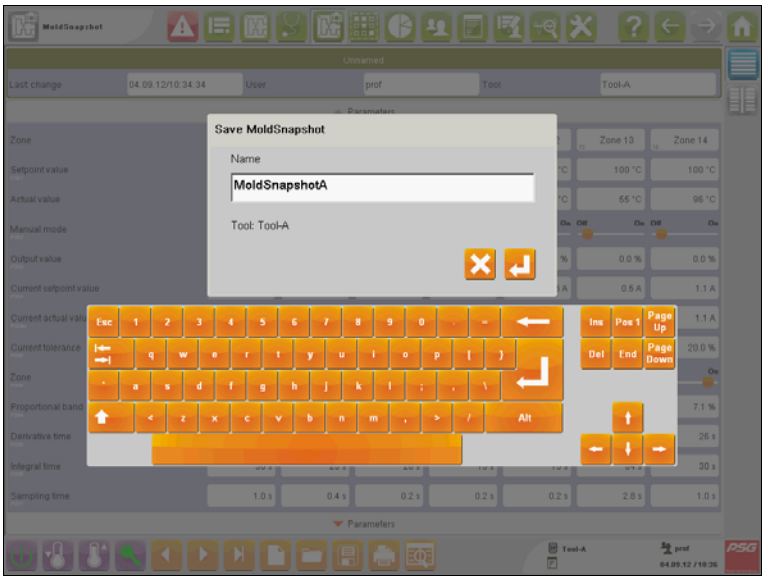
Scroll from zone to zone

Navigation keys (see chapter ↗Views)

Press key



Keyboard is overlaid



Enter the name **MoldSnapshotA** using the visual keyboard

Confirm

MoldSnapshot with the name MoldSnapshotA is created

8.8.1 Create a new MoldSnapshot (out of an existing)

To work with a MoldSnapshot, it must be created first.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

8.8.2 Open MoldSnapshot

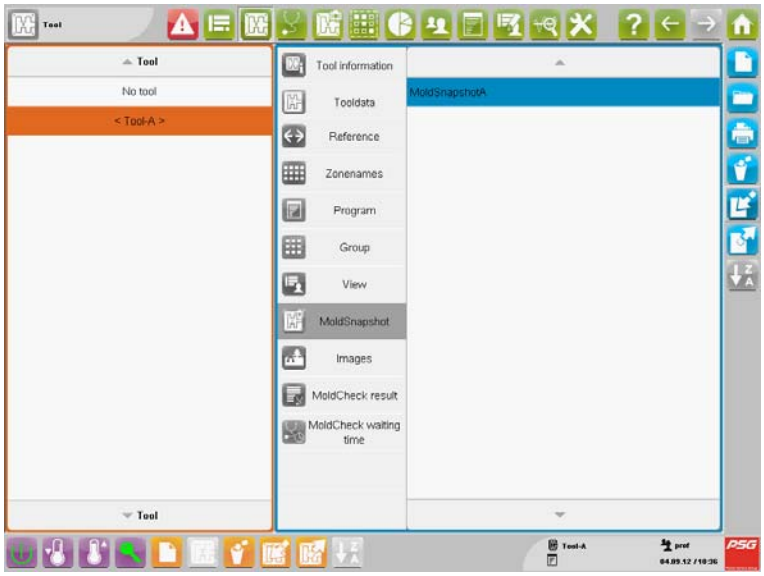
=

Open existing MoldSnapshot.
(See also ↗Compare MoldSnapshot, to change first file)

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Either ...

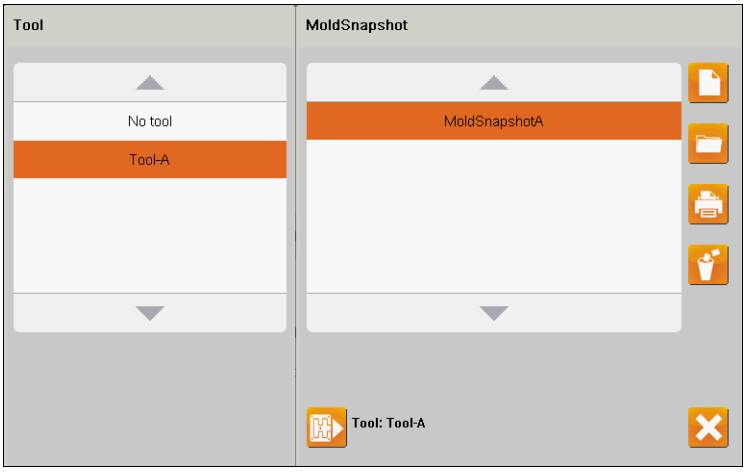
Select and open MoldSnapshot in the tool management



Press key

... Or

Press key MoldSnapshot and the stored MoldSnapshot's, for the tool, are presented in a list to open.



Press key

Select MoldSnapshot in the list
Select tool

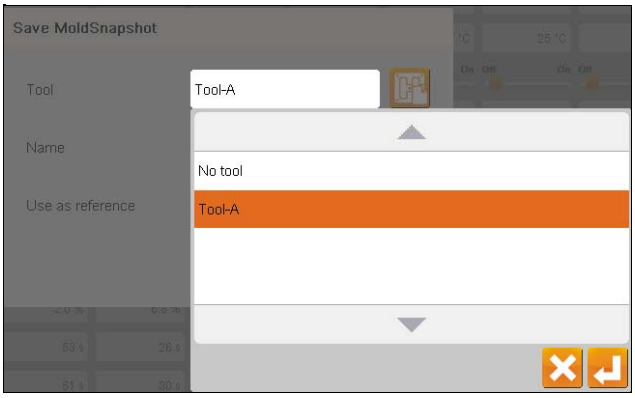
Open or reject

Was a ↗Reference specified in the tool management, the here opened MoldSnapshot is compared with this reference. In the header <selected MoldSnapshot s.o.> **<-> Reference** is displayed.

8.8.3 Save MoldSnapshot

Save the MoldSnapshot with name.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

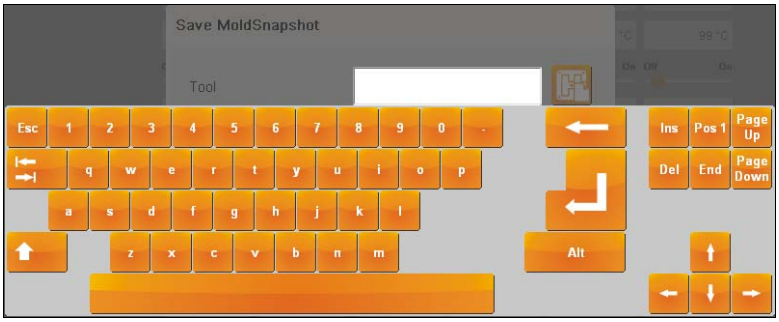


Store

...with **another** tool.

Select another tool.

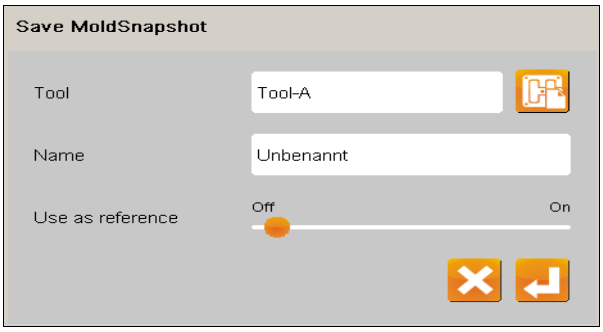
Confirm.



...with **a just created** tool.

Enter the name of the new tool by using the visual keyboard

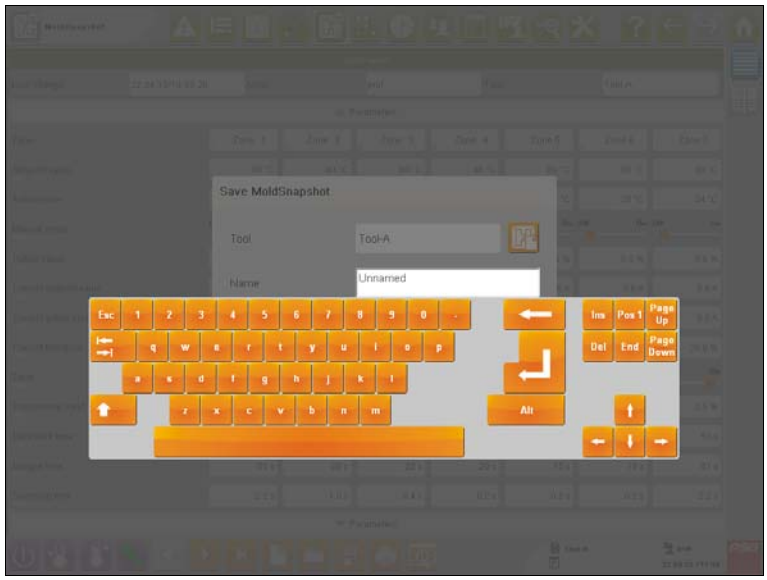
Confirm



...with the tool specified.

Select field NAME.

By saving the result files, they can be defined as references for comparison (see also chapter ↗Reference).



Keyboard is overlaid

Enter the name using the visual keyboard

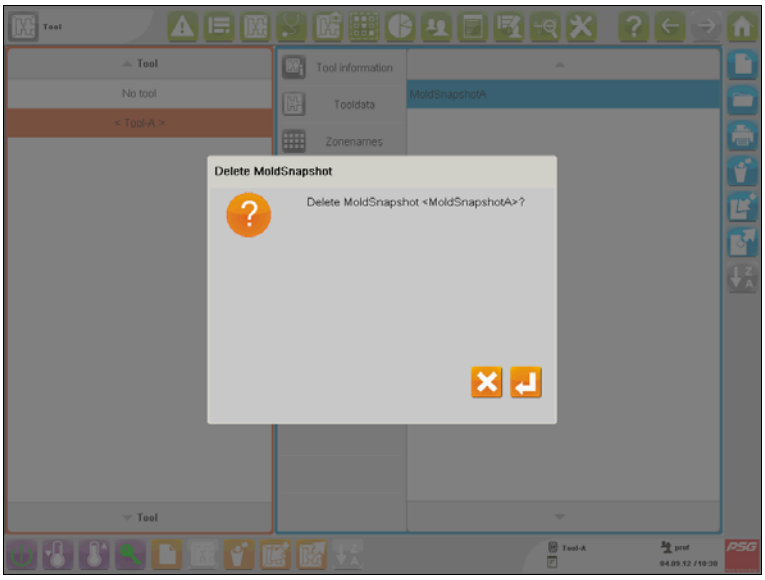
Confirm

8.8.4 Delete MoldSnapshot

=

Delete the selected MoldSnapshot.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



Press key

Confirm or reject

8.8.5 Print MoldSnapshot

=

Print the displayed MoldSnapshot.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

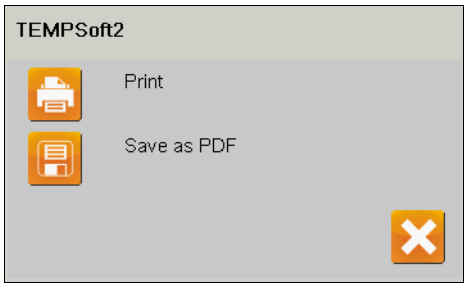
Press key

Dependent of printer setting

See Chapter↗Printer settings

Login as **admin**
See Chapter↗Login/Logout

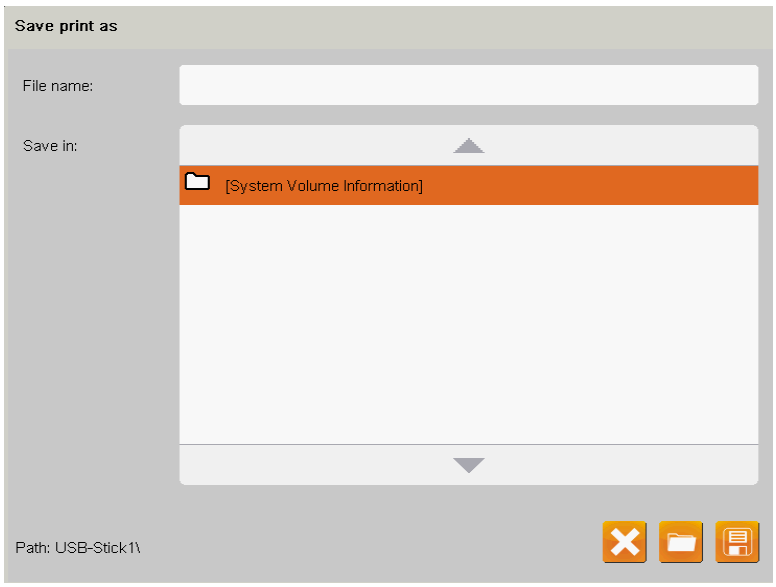
Is NO printer selected and no USB stick connected, a message is shown an the function is canceled.



PRINTER installed

Program is printed on this printer,

and/or stored as PDF file on USB stick.



NO printer selected and/or stored as PDF file on USB stick.

The MoldSnapshot is stored as file on a USB stick with the here specified name (to change the name select the name field).

Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Start saving	Press key
After completion of the dialogue, the status of the save is displayed.	

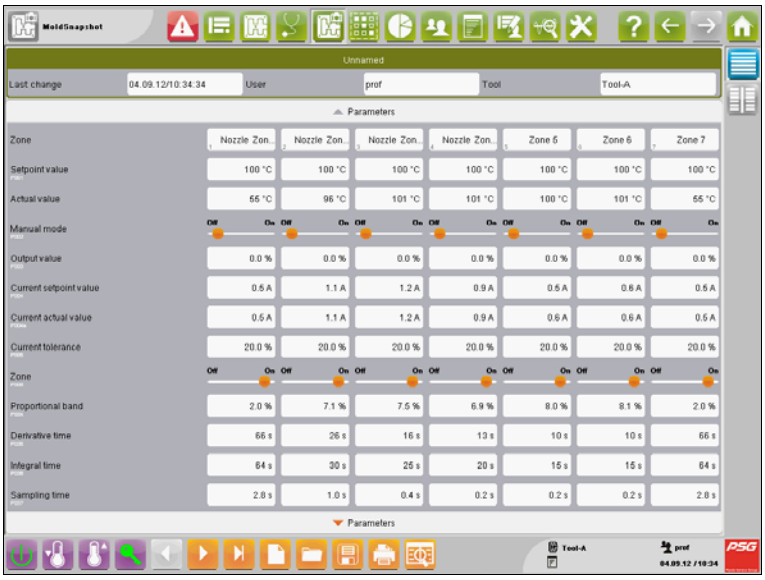
8.8.6 Compare MoldSnapshot

It must be at least 2 MoldSnapshot's available. One MoldSnapshot is opened and the second is used comparative.

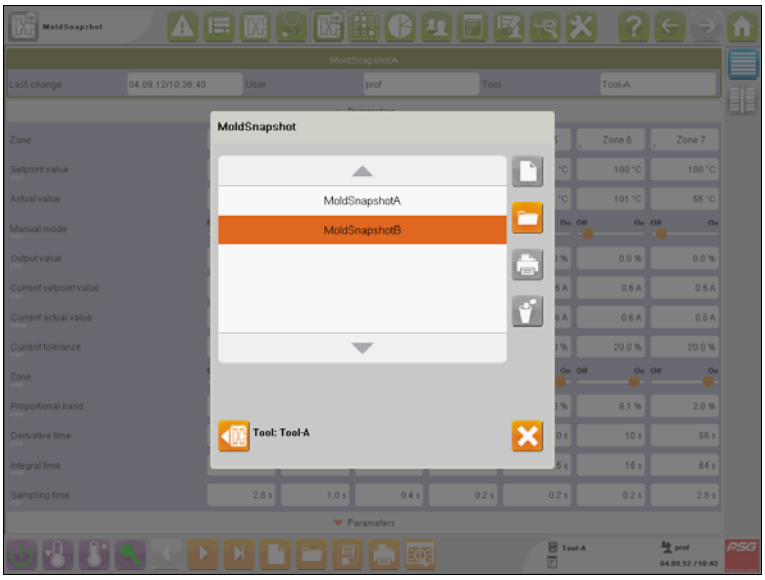
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Was a ↗Reference specified in the tool management, the here opened MoldSnapshot is compared with this reference. In the header <selected MoldSnapshot s.o.> **<-> Reference** is displayed.

(***)

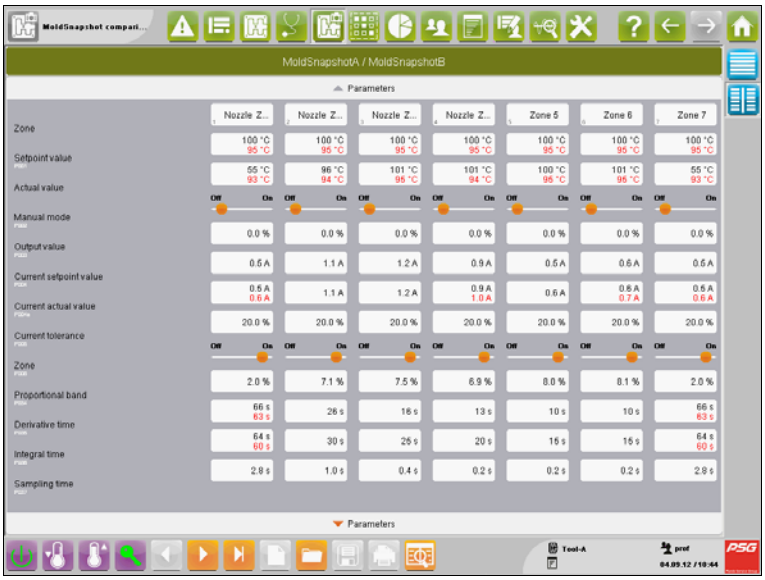


Press key



Select MoldSnapshot for comparison

Press key



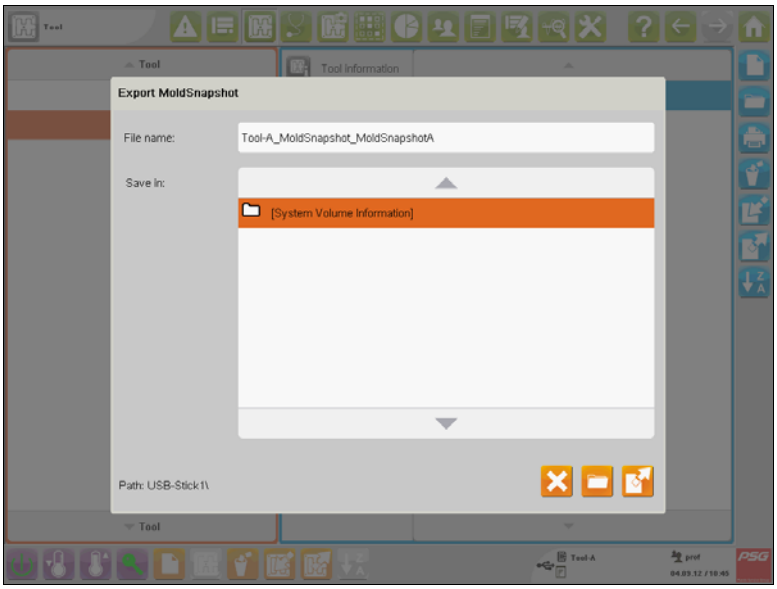
The two selected MoldSnapshot's are displayed in the window. To facilitate the detection of differences, the files are marked **black** and **red**. The file names are also marked to allow easy classification.

Shows see (***)

Hides the comparison file

8.8.7 Export MoldSnapshot

The MoldSnapshot of a tool is exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown an d the function is canceled.	
	Select tool on the left side, select MoldSnapshot, press key. Should the default file name be changed, click into the field file name and change the file name by the visual keyboard.
Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate export	Press key

Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.

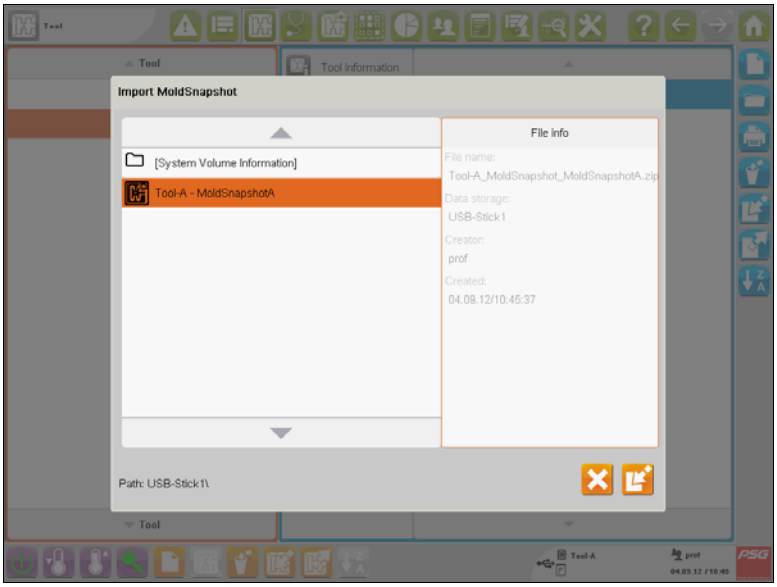
After completion of the dialogue, the status of the export is displayed.

8.8.8 Import MoldSnapshot

The MoldSnapshot of a tool is imported from a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown an d the function is canceled.



Select tool, where the MoldSnapshot should be imported, on the left side, press key.

Was a different file name, than the standard specified, note file info.

Cancel function — Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

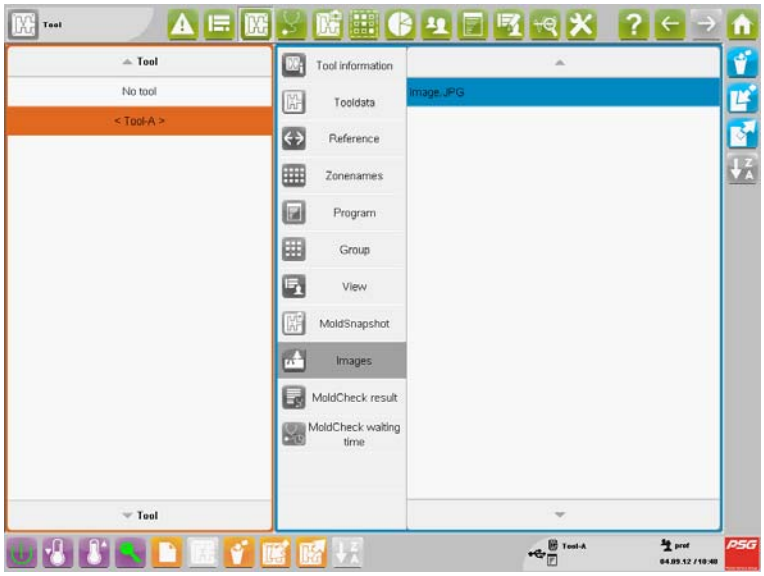
Select a directory on the USB stick — Press key

or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate import after selection of file	Press key
Before import it is checked, whether there is already a file with the same name in **TEMPSoft2**. The file can be overwritten and/or imported with another name.	
After completion of the dialogue, the status of the import is displayed.	

8.9 Images

In the user defined view the images may be used as background.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



The tool management is displayed, tool Tool-A is selected.

Select images.

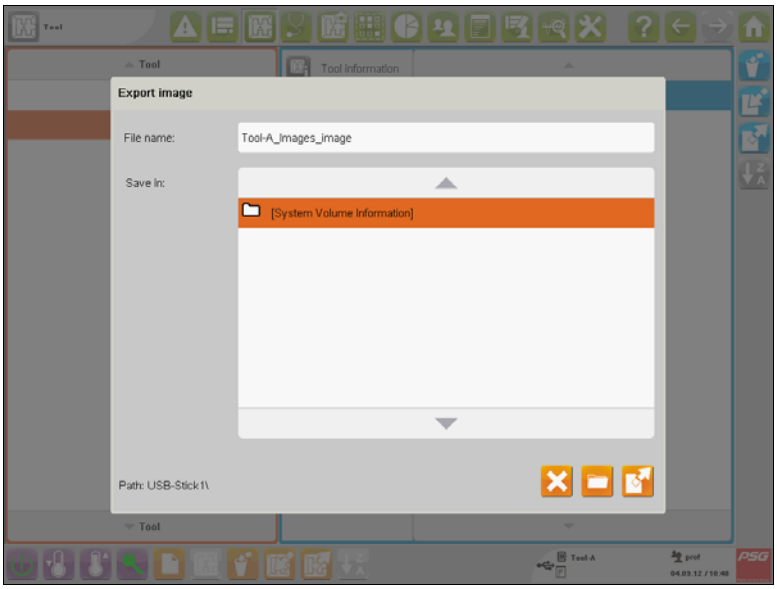
The available images are displayed with their names.

*.BMP, *.JPG, *.CMP, *.TIF, *.PCX, *.DCX, *.PCD, *.FPX, *.DIC, *.WMF, *.EMF, *.DXF, *.IFF, *.CGM, *.PLT, *. PSD, *.TGA, *.EPS

Image types

8.9.1 Export images

Images are exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown an d the function is canceled.	
	Select tool on the left side, select image, press key. Should the default file name be changed, click into the field file name and change the file name by the visual keyboard.
Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate export	Press key

Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.

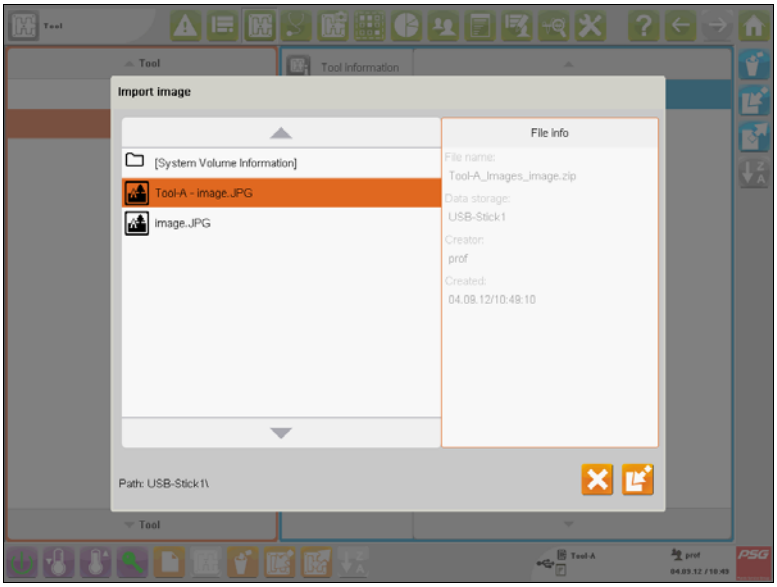
After completion of the dialogue, the status of the export is displayed.

8.9.2 Import images

Images are imported from a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown an d the function is canceled.



Select tool, where the image should be imported, on the left side, press key.

Was a different file name, than the standard specified, note file info.

Cancel function — Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

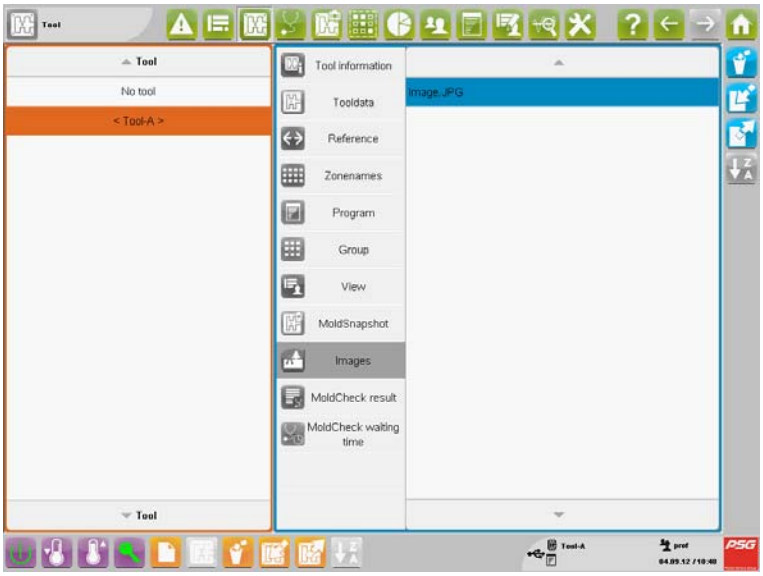
Select a directory on the USB stick — Press key

or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate import after selection of file	Press key
Before import it is checked, whether there is already a file with the same name in **TEMPSoft2**. The file can be overwritten and/or imported with another name.	
After completion of the dialogue, the status of the import is displayed.	

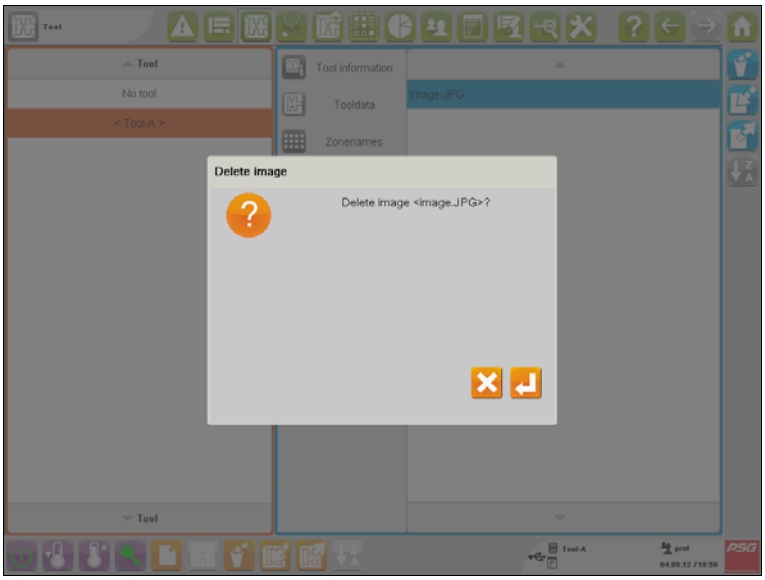
8.9.3 Delete images

Delete the selected image

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	



Press key

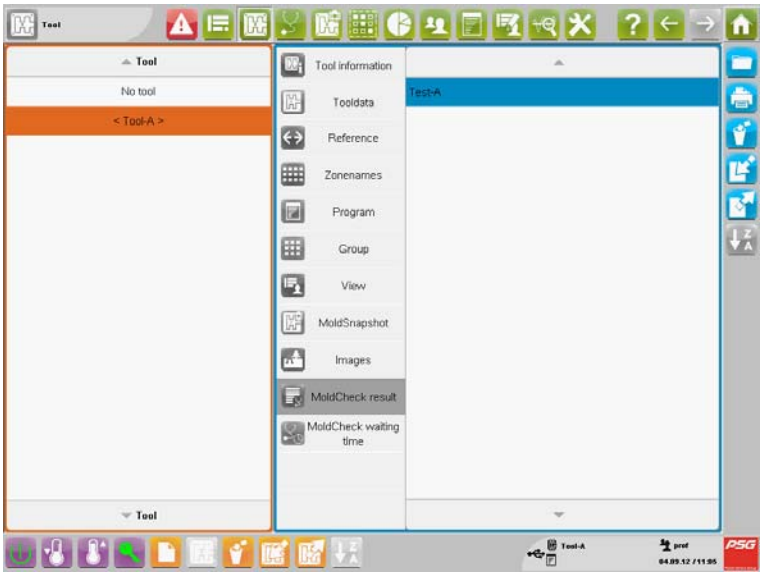


Confirm or reject

8.10 MoldCheck result

Was a ↗MoldCheck executed for the tool and the result stored in a file, the result files are stored here.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



The tool management is displayed, tool Tool-A is selected.

Select MoldCheck result

The MoldCheck must have been executed completely for the tool and the result file must have been stored.

Press key

Was a ↗Reference specified in the tool management, the here opened MoldCheck is compared with this reference. In the header <selected MoldCheck s.o.> **<-> Reference** is displayed.

Details on analysis of the result see chapter ↗Show MoldCheck result

8.10.1Print MoldCheck result

= Print MoldCheck result

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

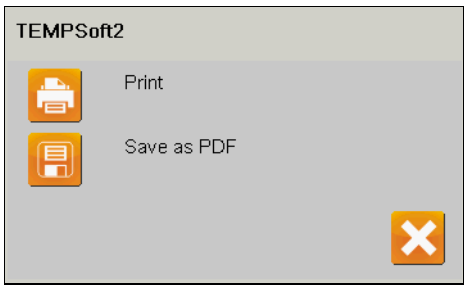
Press key

Dependent of printer setting

See Chapter↗Printer settings

Login as **admin**
See Chapter↗Login/Logout

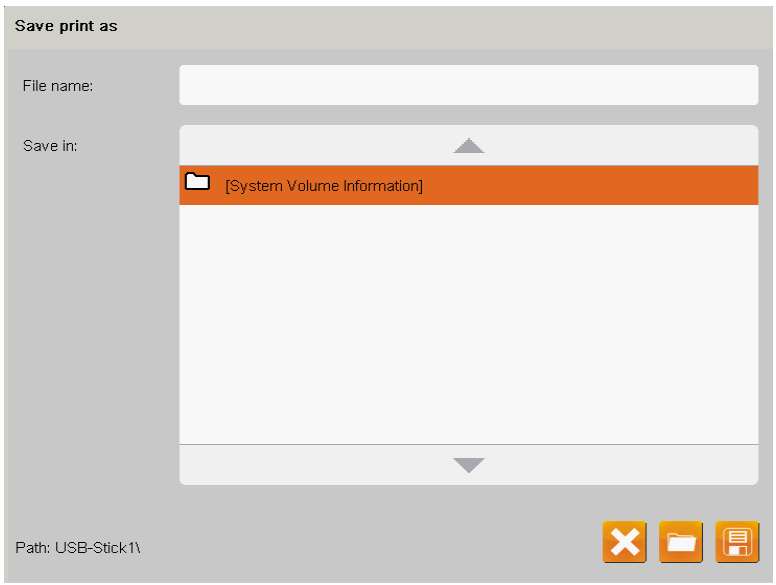
Is NO printer selected and no USB stick connected, a message is shown an the function is canceled.



PRINTER installed

The MoldCheck result is printed on this printer,

and/or stored as PDF file on USB stick.



NO printer selected and/or stored as PDF file on USB stick.

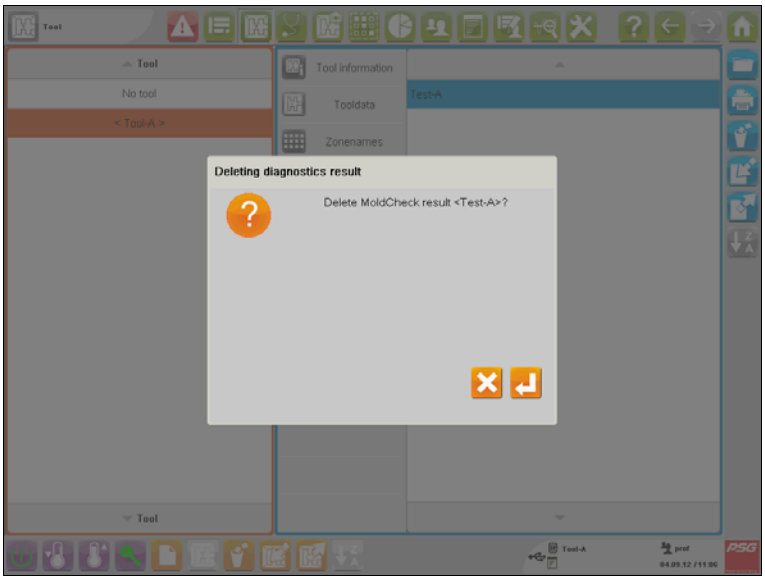
Program is stored as file on a USB stick with the here specified name (to change the name select the name field).

Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Start saving	Press key
After completion of the dialogue, the status of the save is displayed.	

8.10.2Delete MoldCheck result

= Delete MoldCheck result

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in. **Either ...**	

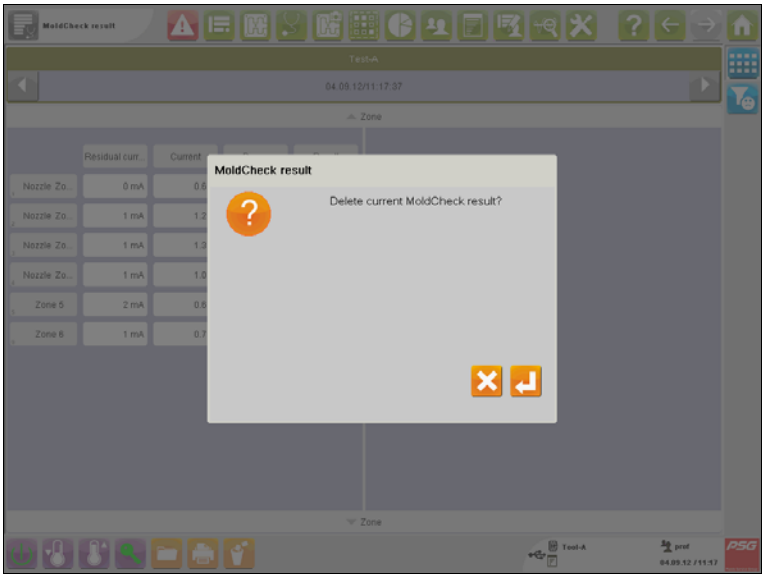


Select MoldCheck result

Press key

Confirm or reject

... Or



Press key

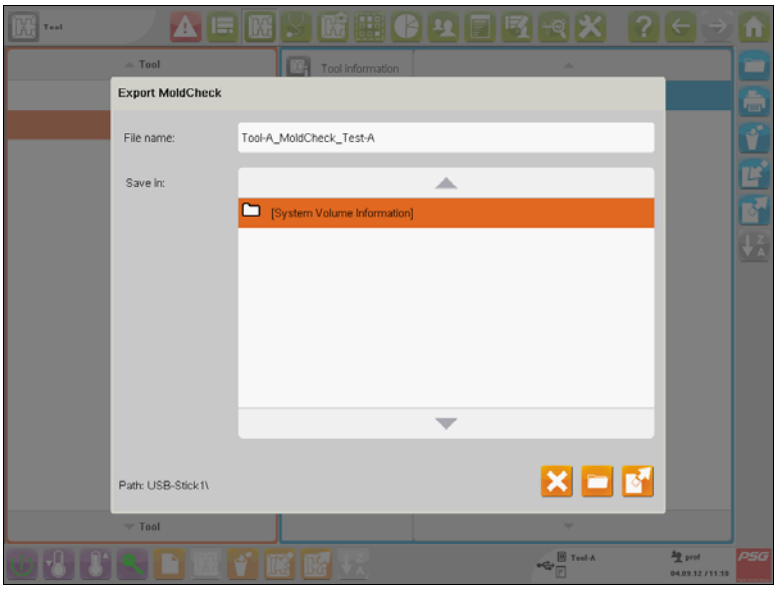
Confirm or reject

8.10.3Export MoldCheck result

The MoldCheck result of a tool is exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown and the function is canceled.



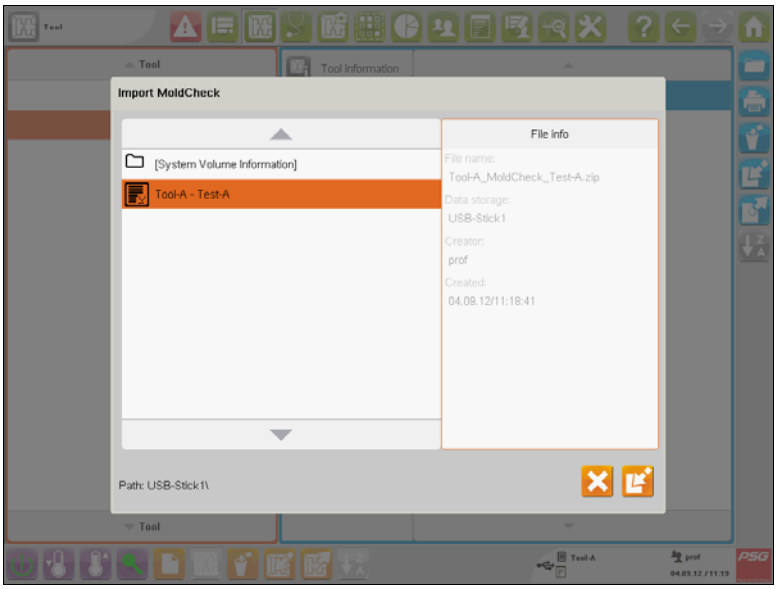
Select tool on the left side, select MoldCheck result, press key.

Should the default file name be changed, click into the field file name and change the file name by the visual keyboard.

Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate export	Press key
Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.	
After completion of the dialogue, the status of the export is displayed.	

8.10.4Import MoldCheck result

The MoldCheck result of a tool is imported from a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown and the function is canceled.	
	Select tool, where the MoldCheck result should be imported, on the left side, press key.
Was a different file name, than the standard specified, note file info.	
Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	

Activate import after selection of file

Press key

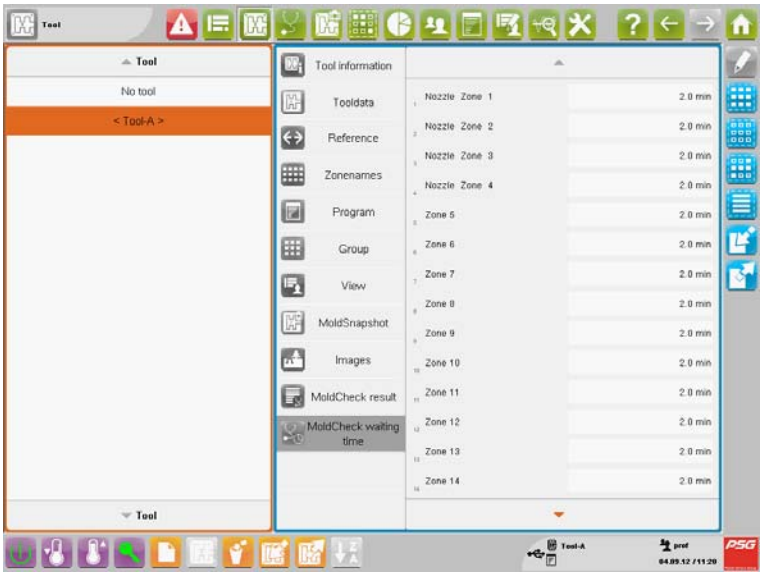
Before import it is checked, whether there is already a file with the same name in **TEMPSoft2**. The file can be overwritten and/or imported with another name.

After completion of the dialogue, the status of the import is displayed.

8.11 MoldCheck waiting time

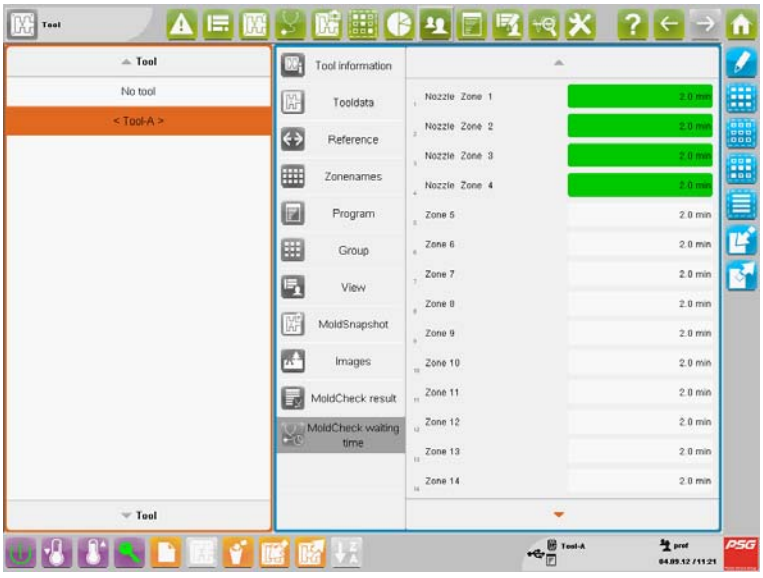
Change of the MoldCheck waiting time for single zones for ↗MoldCheck.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



The tool management is displayed, tool Tool-A is selected.

Select MoldCheck waiting time



The zones are selected. Procedure to select zones see chapter ↗Zone selection.

Press key

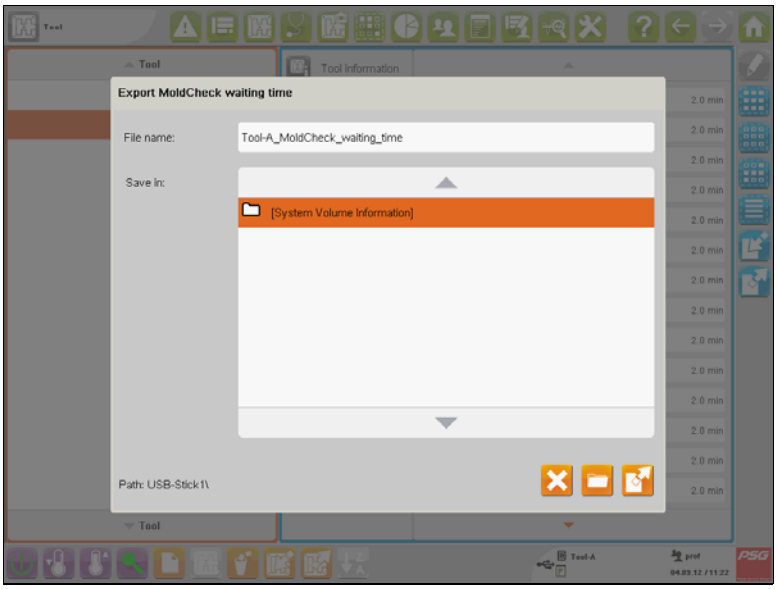
Details how to proceed see chapter ↗Change waiting time

8.11.1Export MoldCheck waiting time

The MoldCheck waiting time of a tool is exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown and the function is canceled.



Select tool on the left side, select MoldCheck waiting time, press key.

Should the default file name be changed, click into the field file name and change the file name by the visual keyboard.

Cancel function — Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

Select a directory on the USB stick — Press key

or a directory on the USB stick by double click on

Return to previous directory by double click on

Activate export — Press key

Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.

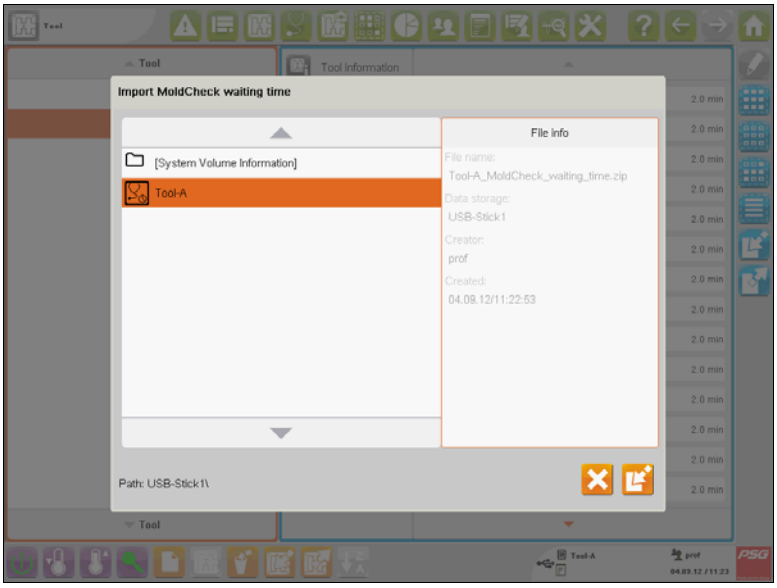
After completion of the dialogue, the status of the export is displayed.

8.11.2Import MoldCheck waiting time

The MoldCheck waiting time of a tool is imported from a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown and the function is canceled.



Select tool, where the MoldCheck waiting time should be imported, on the left side, press key.

Was a different file name, than the standard specified, note file info.

Cancel function — Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate import after selection of file	Press key
Since only one file per tool is available in **TEMPSoft2**, the file is imported without any further confirmation.	
After completion of the dialogue, the status of the import is displayed.	

9 Quality management

The quality management offers the operator the following functions:

- ↗Log book
  All events and alarms of the hot runner controller are recorded in the log book in chronological order.
- ↗InfoBoard
  In the background, the system executes analysis permanently and informs the operator of important things by the InfoBoard.
- ↗MoldStat
  During the operation the hot runner controller calculates from the available process data automatically statistical parameters in the background. All characteristics have the objective of documenting the constancy of the temperature profile.

9.1 Log book

Description 	All events are recorded in the log book in chronological order, e.g. operator input, start and stop of TEMPSoft2, etc. as well as all alarms of the hot runner controller.
How it works	The recording of events and alarms in the log book by the day. Each entry is recorded with date, time, view, IP address, user, function, zone, value, unless determined. The log book can be are exported on a connected USB stick by the day. Information can be selectively displayed by setting filter for time, zone, function.
What good is it	Both during operation, as well as by analysis of the stored records on USB stick, sequences of events can easily be traced.

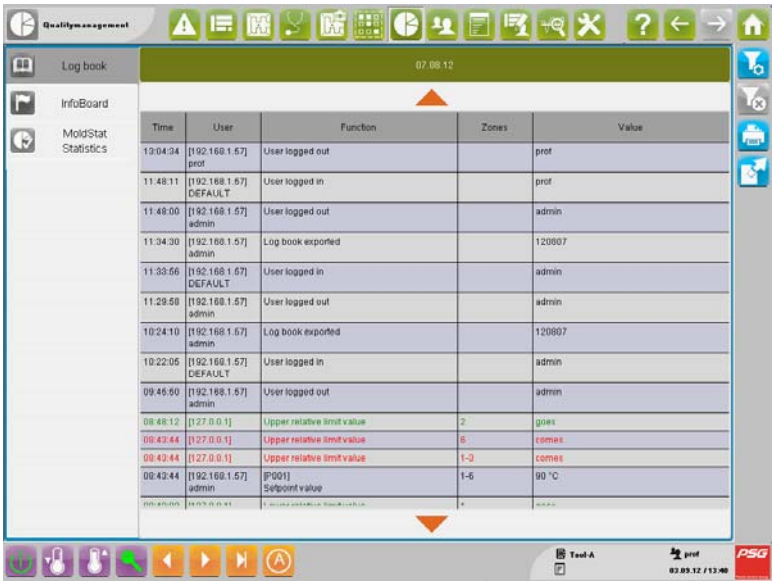
Maximum of 35 days will be held in files stored in the system. Thereafter the oldest file is deleted and a new file created.

9.1.1 Call log book

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Call log book

Call function



In the basic state, the log book of the current day is displayed with the current entry at the top.

Scroll backwards day by day

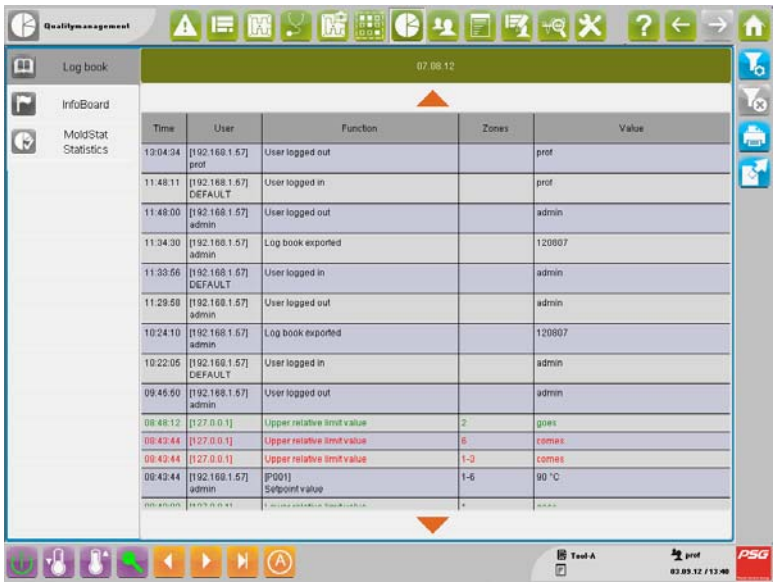
Scroll forwards day by day

Go to displays a list of log books (selection date).

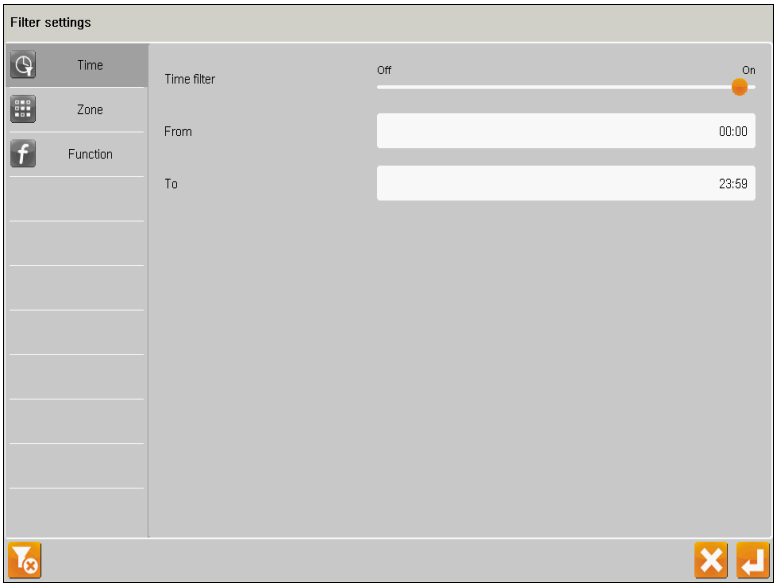
A recording of events and alarms is only done, when TEMPSoft2 is running.

9.1.2 Filter log book

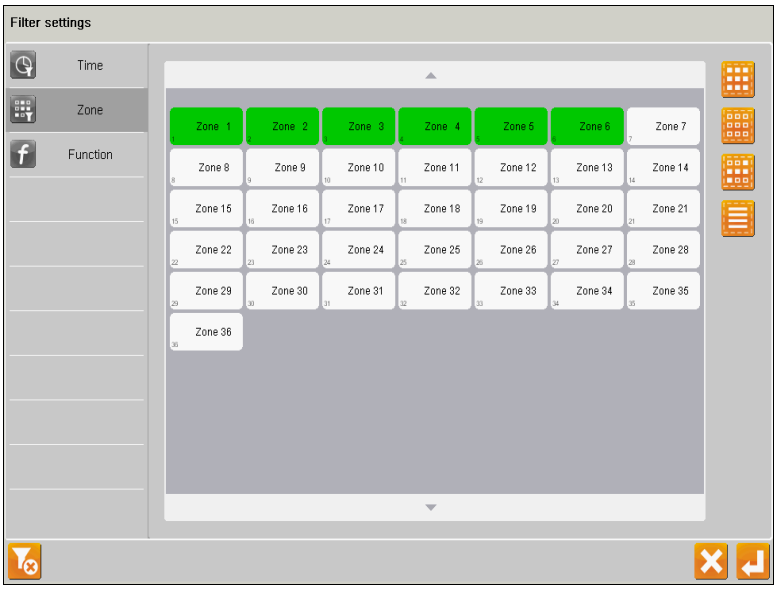
The filter time, zone, function can be combined with each other.
The filter setting effects the online output, as well as the print data and the export.
Even when scrolling between the log books per day, the filter settings remain.



Press key

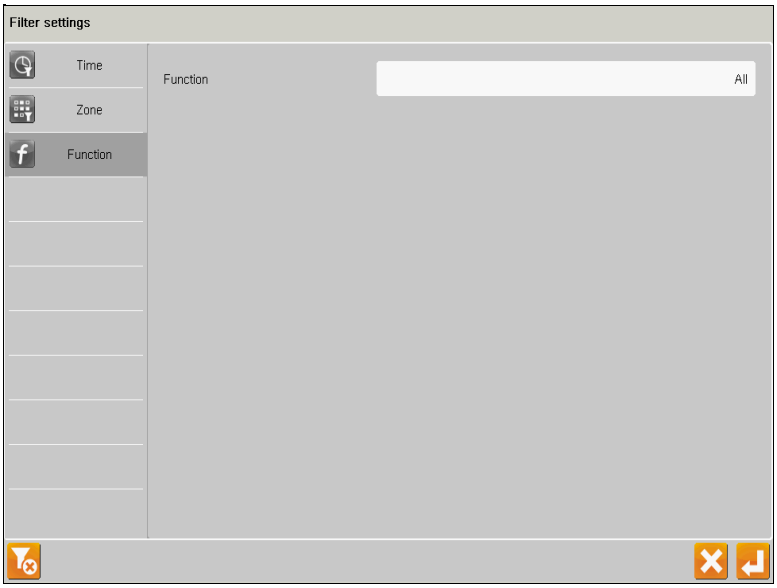


Once the time filter is turned on, the start and end time can be specified.



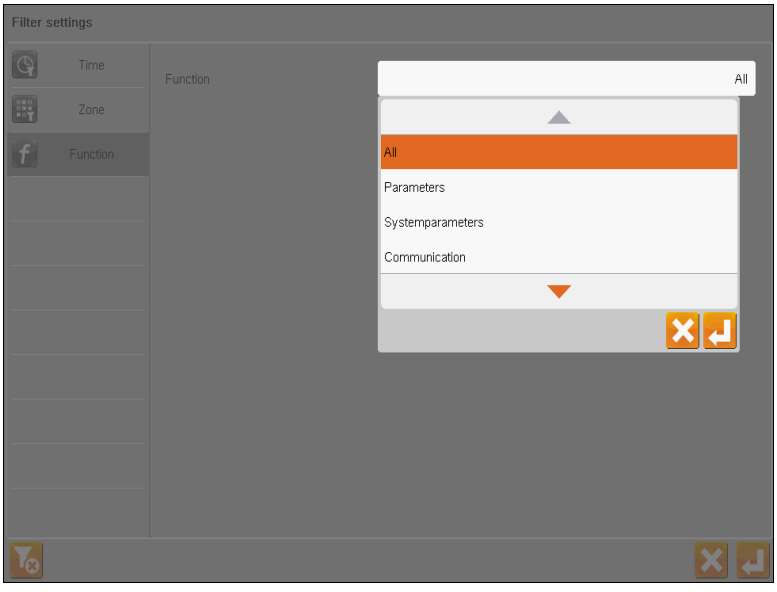
Zone filter

Procedure to select zones see chapter ↗Zone selection.



Function filter

All, or



Parameters, ...
System parameters, ...
Communication, ...
Inputs, ...
Outputs, ...
Alarms, ...
TEMPSoft2 Settings
Others

For ... further selection menus displayed

The log books are displayed without filter.

Deactivate filter

9.1.3 Print log book

Call function

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

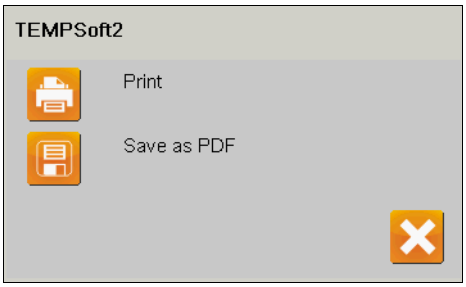
Press key

Dependent of printer setting

See chapter ↗Printer settings

Login as **admin**
See chapter ↗Login/Logout

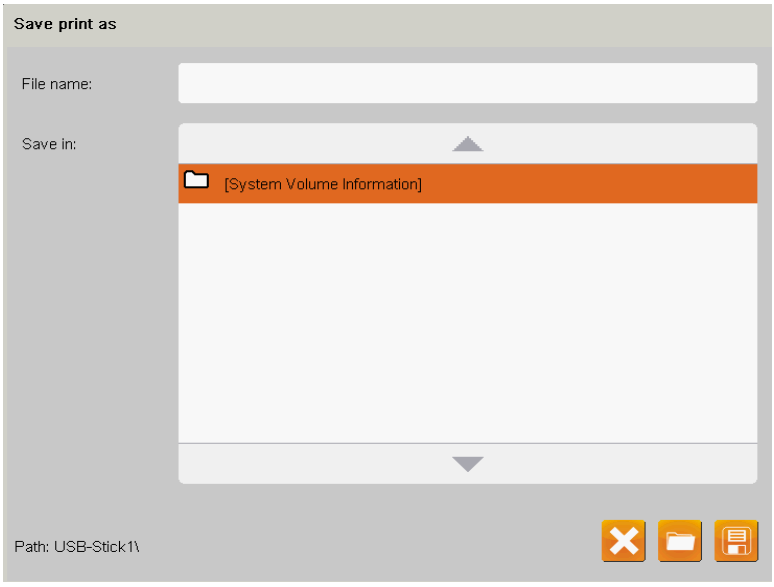
Is NO printer selected and no USB stick connected, a message is shown an the function is canceled.



PRINTER installed

Log book is printed on this printer,

and/or stored as PDF file on USB stick.



NO printer selected and/or stored as PDF file on USB stick.

Log book is stored as file on a USB stick with the here specified name (to change the name select the name field).

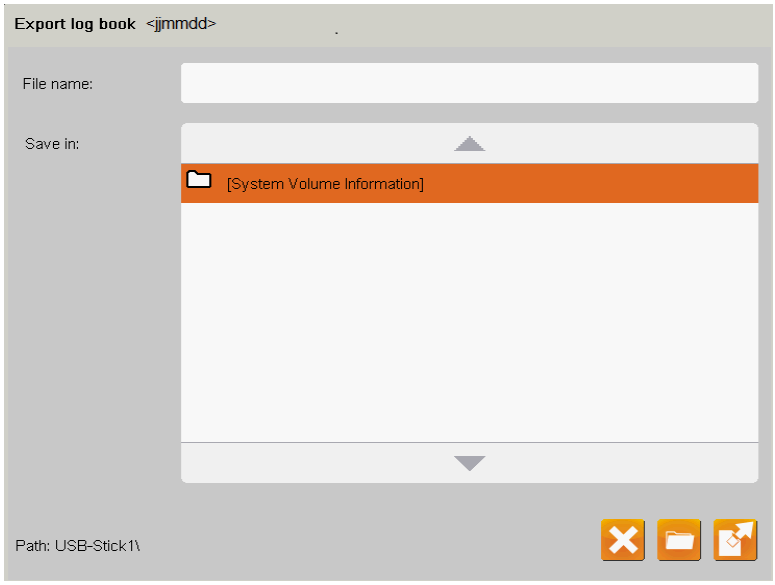
Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Start saving	Press key
After completion of the dialogue, the status of the save is displayed.	
Only the filtered data is shown in the print, when the filter is active.	

9.1.4 Exporting log book

Call function

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown and the function is canceled.



Log book is stored as file (.CSV) on a USB stick with the here specified name (to change the name select the name field).

Cancel function — Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

Select a directory on the USB stick — Press key

or a directory on the USB stick by double click on

Return to previous directory by double click on

Activate export — Press key

Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.

After completion of the dialogue, the status of the export is displayed.

Only the filtered data is shown in the export, when the filter is active.

Notice, when working with the CSV files in EXCEL:
Reference data from line 9
Import row Zone, Value as TEXT

9.2 InfoBoard

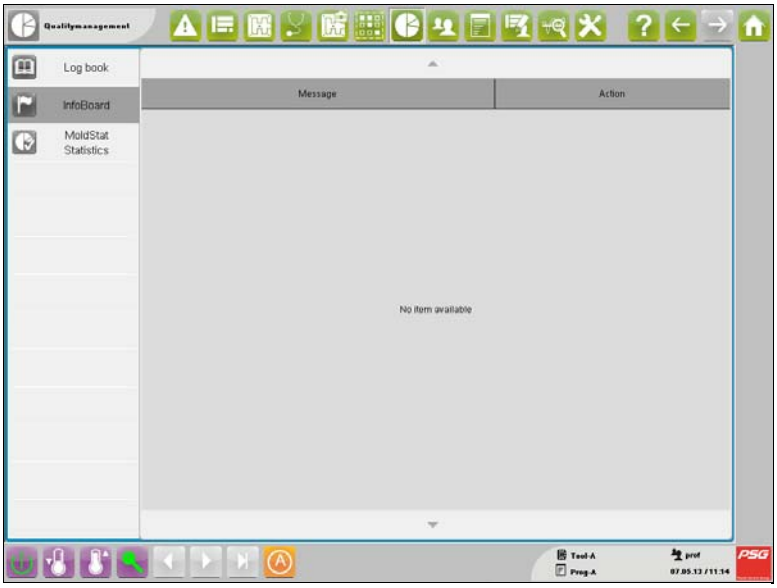
Description 	To speak from our own experience, the potential of hot runner controllers is by far not utilized by the operator. This has to be improved. The novel InfoBoard function provides the operator of hot runner controllers with an optimal utilization of the scope of functions on the controller. Imagine the InfoBoard as pin board, where the hot runner controller pins information and messages, which the operator may take into consideration or not.
How it works	During operation the hot runner controller check continuously miscellaneous characteristics and status and determines, whether this message is shown in the InfoBoard. Due to this fact, very often monitoring functions are not active, because it needs operator interaction, the operator lacks knowledge or he has utterly overlooked them. The InfoBoard points out actively problems and status for the operator. A part of the messages can directly be acknowledged here and the open issue be solved.
What good is it	Valuable information to support the operator operating reliability Control of system functions

9.2.1 Call InfoBoard

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

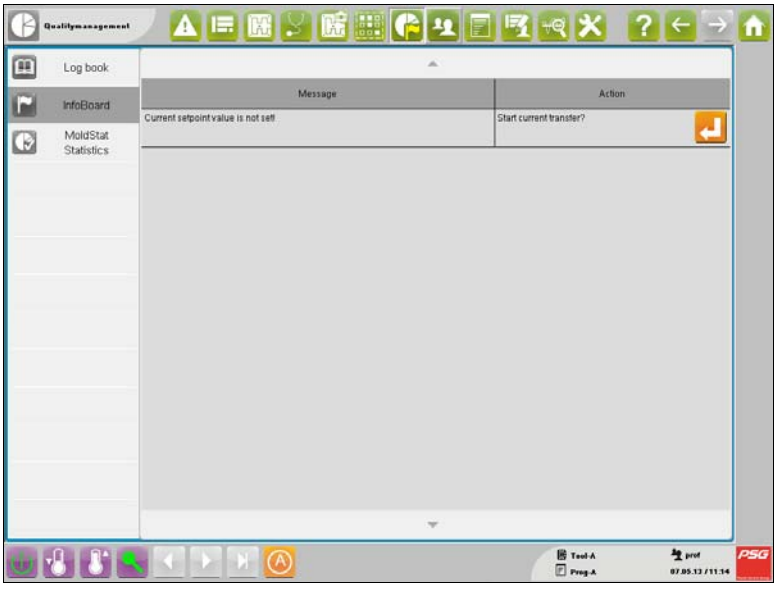
Call InfoBoard

Call function



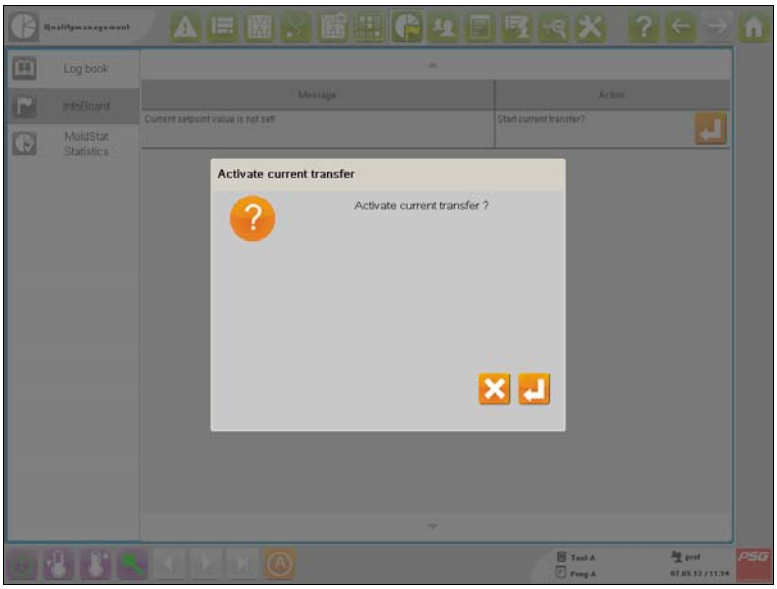
Are no messages and measures available, the InfoBoard is empty.

As soon as a message is pending, this is shown in the key symbol and the user can change quickly to view InfoBoard.

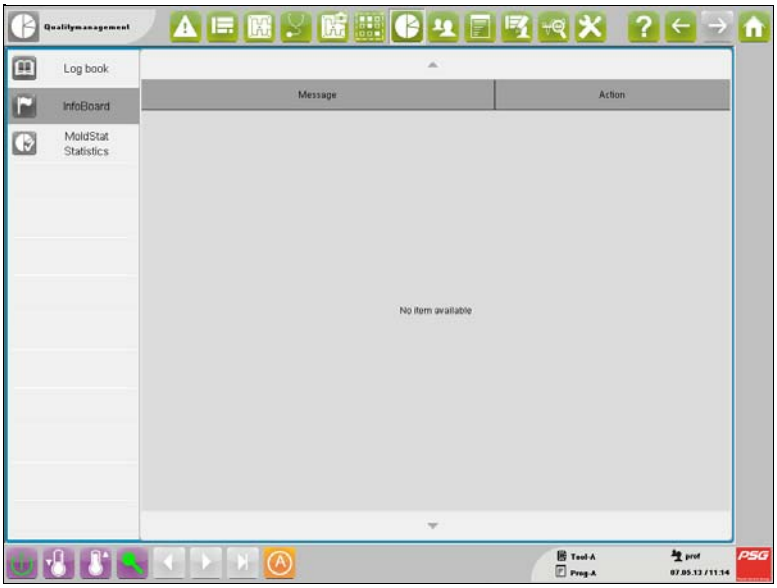


Are messages and measures existing, they are shown to the operator.

Proposed measure: Activate current transfer



The user selects the proposed measure.
Confirm measure to activate it.



Can the measure be executed, it is deleted from the Info-Board.

The following messages and measures are available in the InfoBoard.

Message	Current setpoint value is not set!
Proposed measure	Start current transfer?
Details	Current setpoint value = 0.0 A (see parameter ↗[P004] Current setpoint value) See chapter ↗Current display and execute current transfer.

Message	Process monitoring is not active
Proposed measure	Activate process monitoring?
Details	Is the process monitoring not activated, although the learning phase is terminated, the operator receives this message. See chapter ↗Process Monitoring

Message	Wrong zone type set
Proposed measure	Take over zone type?

Details	The zone type was identified as wrong.
Prerequisites	■ Sensor short-circuit (SSC) is activated (see chapter ↗Digital-/ouputs) ■ the identification is terminated (see parameter ↗[P030] Identification)

Message	Current value outside tolerance band
Proposed measure	Start current transfer?
Details	E.g. after change of tool See chapter ↗Current display and execute current transfer

Message	Sensor error existent
Proposed measure	Search and activate leading zone?
Details	At the auto leading zone operation (parameter ↗[P019] Auto leading zone = ON) a sensor error is detected. At confirmation of the proposed measure, for the zone with the sensor errors an adequate zone is searched and set as leading zone.

9.3 MoldStat

Description 	The quality of temperature control can be measured on the basis of characteristics. These characteristics provide the operator with information about the general performance of the recent past and refer to the future control quality. The characteristics are an ideal material for the QA departments of companies, because they are a component for the documentation of the production process and therefore a proper part quality. For hot runner controllers, these characteristics are centralized in MoldStat and the operator can display them at a push of a button.
How it works	During the operation the hot runner controller calculates from the available process data automatically statistical parameters in the background. All characteristics have the objective of documenting the constancy of the temperature profile. In addition to various averages also the maximum temperature deviations from the nominal value ("outliers") are determined. The data is recorded for the active hot runner controller. The characteristics are only determined for zones in control mode and/or in manual mode and/or in leading zone operation. The characteristics are recorded every 5 minutes. The data is stored in a circular buffer. This provides a data capacity of 30 days. With filled circular buffer in data recording, the oldest data will be overwritten.
What good is it	The operator and the quality assurance receive statistic data, on demand. That assures more transparency in the control process.

9.3.1 Call MoldStat Statistics

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

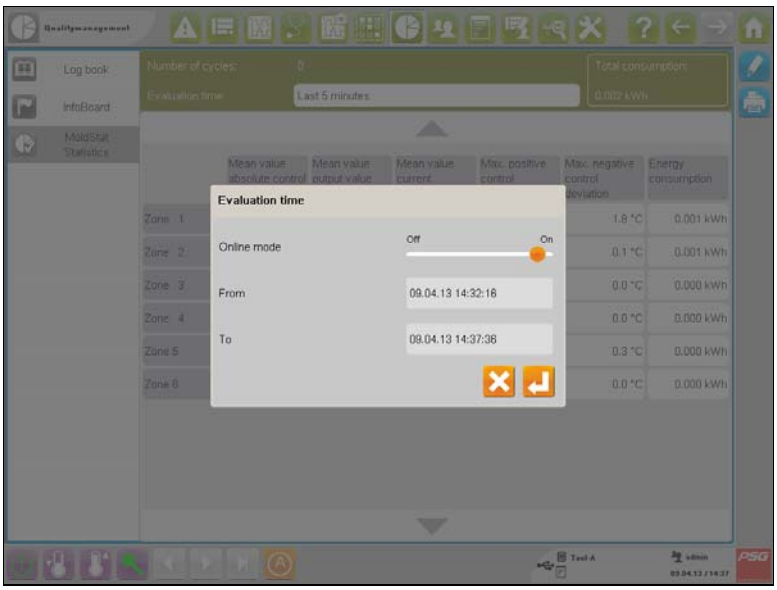
Call MoldStat Statistics

Call function

Log book
InfoBoard
MoldStat Statistics
Number of cycles: 0
Evaluation time: Last 5 minutes
Total consumption: 0.002 kWh
Mean value absolute control deviation
Mean value output value
Mean value current
Max. positive control deviation
Max. negative control deviation
Energy consumption
Zone 1 1.1 °C 11.6 % 0.6 A 2.0 °C 1.8 °C 0.001 kWh
Zone 2 0.0 °C 3.3 % 1.1 A 0.1 °C 0.1 °C 0.001 kWh
Zone 3 0.4 °C 0.0 % 0.0 A 0.6 °C 0.0 °C 0.000 kWh
Zone 4 26.8 °C 0.0 % 0.0 A 27.2 °C 0.0 °C 0.000 kWh
Zone 5 0.1 °C 1.8 % 0.6 A 0.5 °C 0.3 °C 0.000 kWh
Zone 6 0.0 °C 0.0 % 0.0 A 0.0 °C 0.0 °C 0.000 kWh

Online Mode

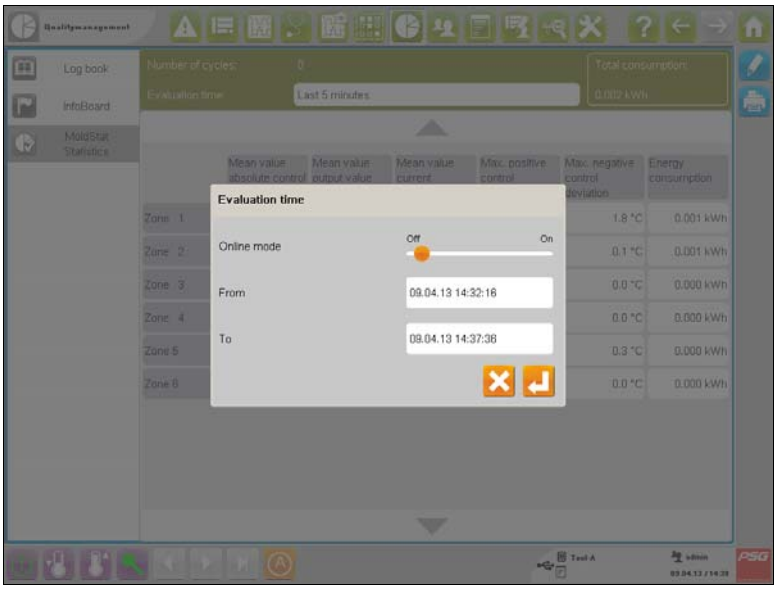
At start of the function the data is shown in online mode, i.e. the last 5 minutes are shown respectively. As long as the view is displayed, it is updated.



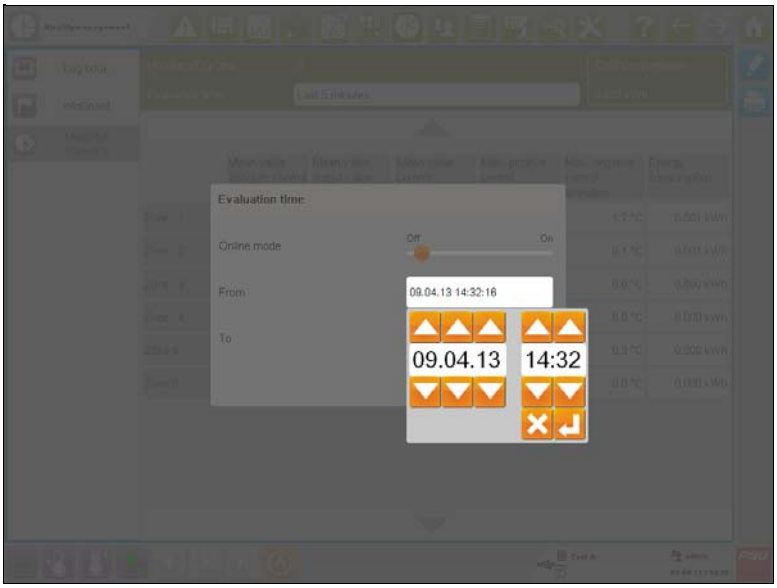
Offline Mode

By selection of the evaluation time, the user can switch the function into offline mode.

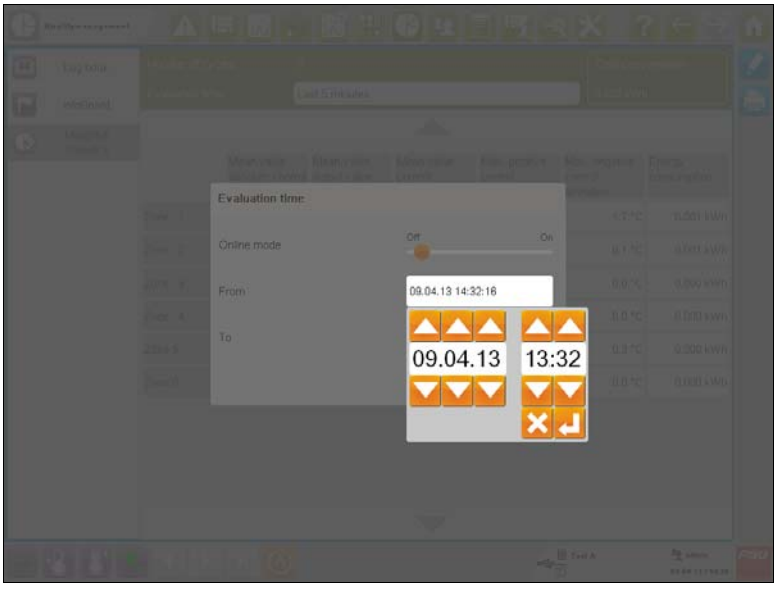
Call menu evaluation time.



Switch-off online mode



Select field **From** and/or **To** and specify time



Confirm

Log book
InfoBoard
MoldStat Statistics
Number of cycles: 0
Evaluation time: 09.04.13 13:32:16 - 09.04.13 14:37:36
Total consumption: 0.018 kWh
Mean value absolute control deviation
Mean value output value
Mean value current
Max. positive control deviation
Max. negative control deviation
Energy consumption
Zone 1 0.1 °C 0.2 % 0.0 A 15.1 °C 58.0 °C 0.010 kWh
Zone 2 0.0 °C 0.0 % 0.0 A 7.7 °C 50.2 °C 0.008 kWh
Zone 3 0.0 °C 0.0 % 0.0 A 3.6 °C 3.8 °C 0.000 kWh
Zone 4 0.1 °C 0.0 % 0.0 A 27.2 °C 0.0 °C 0.000 kWh
Zone 5 0.0 °C 0.0 % 0.0 A 6.6 °C 54.5 °C 0.001 kWh
Zone 6 0.0 °C 0.0 % 0.0 A 0.0 °C 0.0 °C 0.000 kWh

In the evaluation time the specified range is shown.

By specifying a range **From...To**, the mean values for the data recorded in this range are calculated and shown.
Since these are previous values, it is not updated.

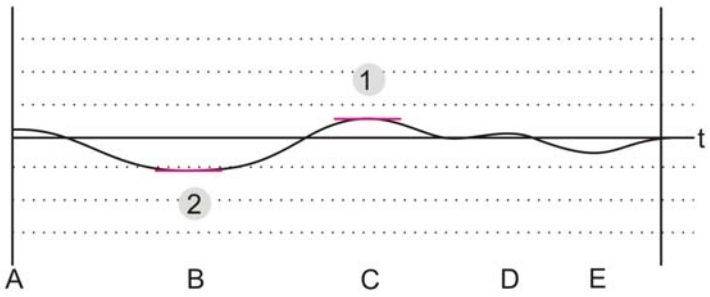
Change to evaluation time "Last 5 minutes"

9.3.1.1 MoldStat characteristics and their meaning

Characteristics:	Meaning:
Number of cycles	Molding cycle determined by external signal
MV abs.ctrl. devia.	Mean value absolute control deviation
MV output value	Mean value output value
MV current	Mean value current
Max pos.ctrl.devia	Maximal positive control deviation (1)
Max neg.ctrl.devia	Maximal negative control deviation (2)
Energy consumption	Value per zone
Total consumption	Consumption of all zones

$$\text{MV abs. crtl.devia.} = \frac{|A| + |B| + |C| + |D| + |E|}{5}$$

$$\text{MV ...} = \frac{A + B + C + D + E}{5}$$



9.3.2 Print MoldStat

Call function

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

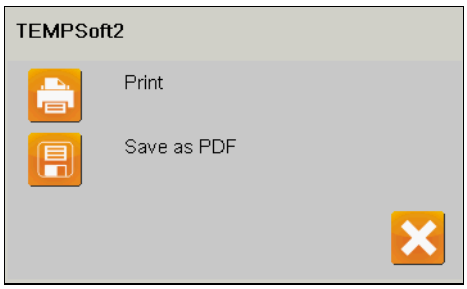
Press key

Dependent of printer setting

See chapter ↗Printer settings

Login as **admin**
See chapter ↗Login/Logout

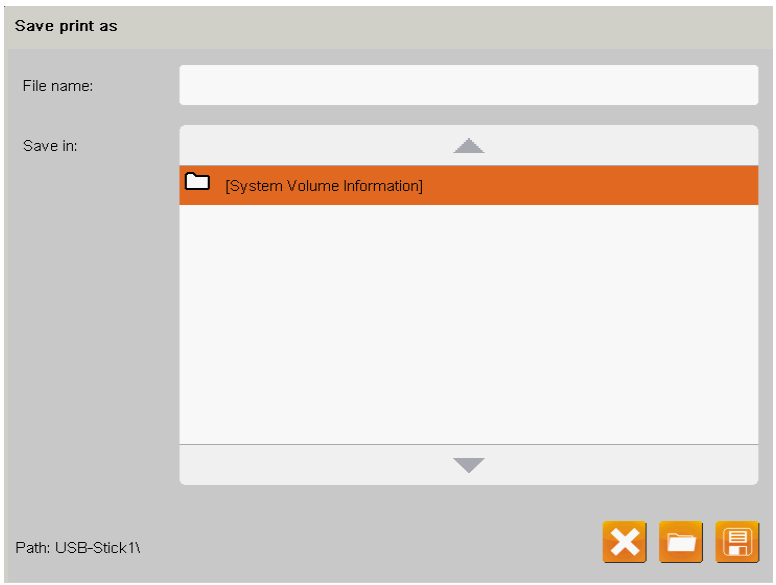
Is NO printer selected and no USB stick connected, a message is shown an the function is canceled.



PRINTER installed

MoldStat is printed on this printer,

and/or stored as PDF file on USB stick.

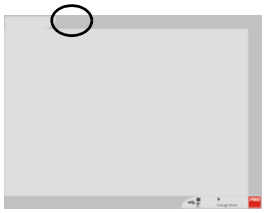


NO printer selected and/or stored as PDF file on USB stick.

MoldStat is stored as file on a USB stick with the here specified name (to change the name select the name field).

Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Start saving	Press key
After completion of the dialogue, the status of the save is displayed.	

10 Alarms



Alarm key - Display alarm list - There are no persistent alarms

Alarm key - Display alarm list - There are persistent alarms

TEMPSoft2 monitors the control process continuously. Alarms are output, when there is a deviation from the normal status, e.g. at limit value violation or a fault in the hardware.

Control work and repair work on the hot runner controller should be carried out through authorized personnel only. Corresponding precautions and warnings are to be considered.

Alarms are shown in the

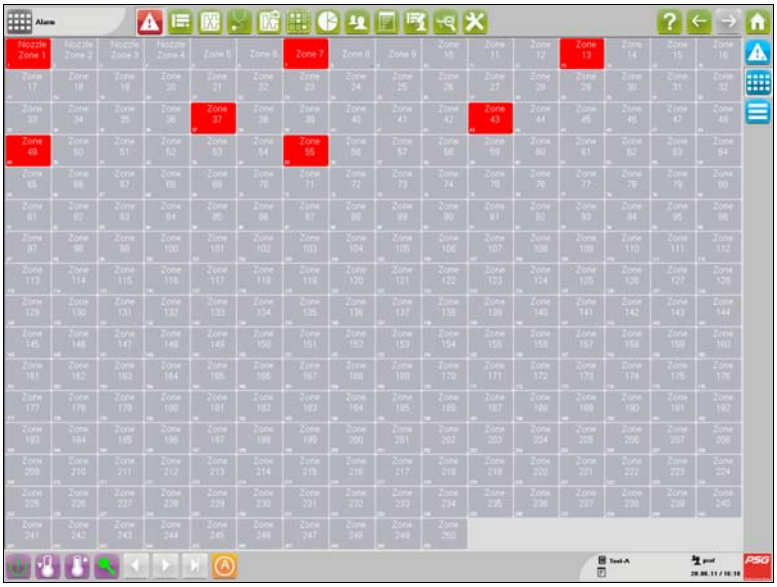
- Alarm list for all zones
- Zone view; is at least one alarm persistent for the zone, the field with the zone name/-number is marked **red** (see chapter ↗Zone view).
- Detail view (see chapter ↗Detail view); persistent alarms result in a color change in the dedicated fields STATUS/ALARMS

10.1 Show alarm list for persistent alarms

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

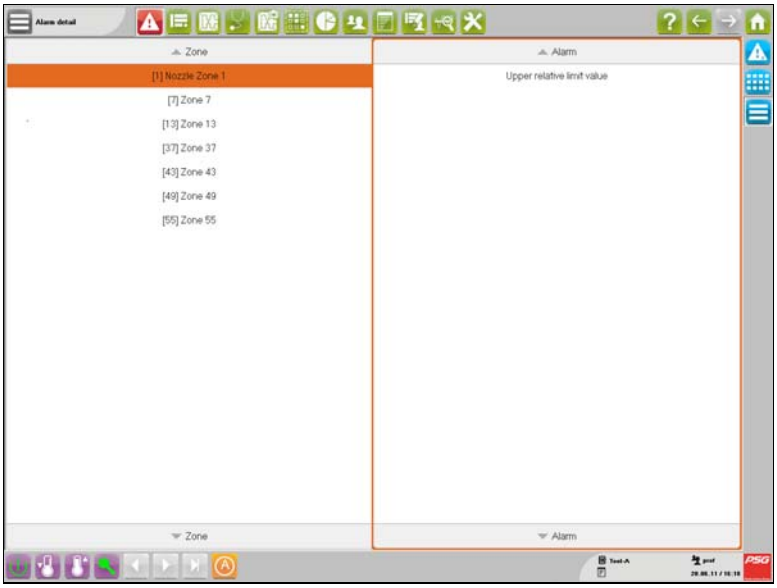
Alarm key - There are persistent alarms

Press key



A call of the alarm list shows ALL zones. Zones with persistent alarms are color coded.

Press key



The view of the alarm list changes from ALL to GROUP.

On the left side the zones are shown, on the right side the alarms.

Is a zone selected on the left, all related alarms are shown.

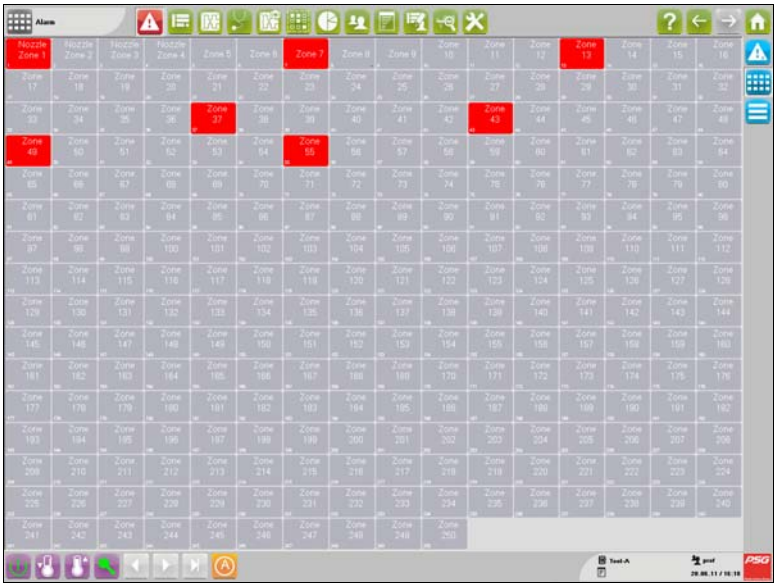
Is an alarm selected on the right, all zones with this alarm are shown.

Press key; return to alarm list view ALL.

10.2 Reset-acknowledging alarms

Alarm acknowledge key

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



Is the alarm list shown, non persistent and storing alarms can be acknowledged.

Press key

Non persistent and storing alarms can be acknowledged.

Confirm

Which alarms can be acknowledged, see chapter ↗Status/ Alarms and Information displays.

10.3 Show alarm list

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Alarm key - There are NO alarms

Press key

A call of the alarm list shows ALL zones. There are NO alarms, so the zones are not color coded.

Press key

The view of the alarm list changes from ALL to GROUP.

A message is shown, when there are NO alarms.

Key is deactivated, because the are no alarms to be acknowledged.

10.4 Alarm presentation Zone view

Is at least one alarm persistent, the filed with the zone name/-number is marked **red** (see chapter ↗Zone view).

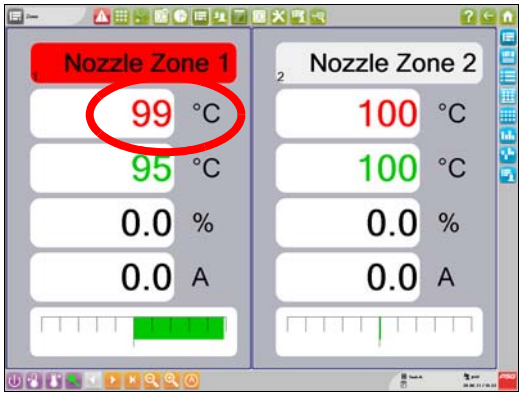
10.5 Alarm presentation Detail view

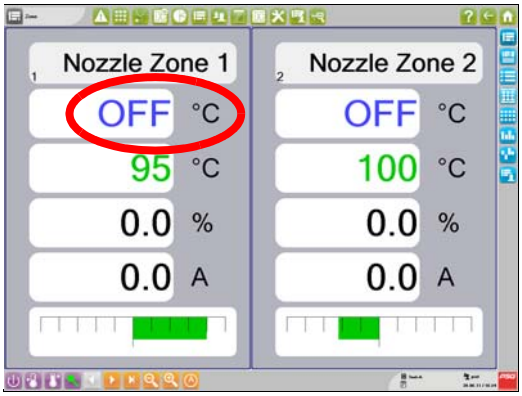
Persistent alarms result in a color change in the dedicated fields STATUS/ALARMS (see chapter ↗Detail view).

10.6 Status/Alarms and Information displays

The current status is shown as

- text in the Detail view (see chapter ↗Detail view) under Status/Alarms
- the 3-digit information display (**blue**) alternating with actual value in the display field actual value of the zone





. It is only shown, when the status is existent.

The persistent alarms result in a color change in the dedicated fields of the Detail view under Status/Alarms. In some fields also the text changes.

For further details on messages see chapter ↗Fehlermeldungen - Fehlersuche/-beseitigung

In the table all possible texts on Status/Alarms and information displays are shown.

The information displays are set to German for language German. In all other languages they are set to English.

10.6.1Information displays profiTEMP

Information display	Error messages profiTEMP Description
Sb	Sensor break (see chapter ↗Fühlerbruch pT: Fb bzw. TC: tCb)
SP	Sensor incorrect polarity (see chapter ↗Fühlerverpolung pT: FP bzw. TC: tCP)
FAL	Sensor short-circuit Short circuit in sensor circuit (see chapter ↗Fühleralarm FAL) ✸
Pot	Potential error
	Current tolerance error
tHY	Current alarm OFF| Current alarm ON (see chapter ↗Thyristoralarm pT: tHY bzw. TC: I-)
rSC	Residual current error
IOL	Short circuit Current overload (see chapter ↗Stromalarm IAL) (Heater with too high power / short circuit in heating circuit)
Hb	Total breakdown of heater (see chapter ↗Komplettausfall Heizer Hb) / heater not connected
	Upper limit value abs. | Lower limit value abs. Upper limit value rel. | Lower limit value rel. Temperature outside limit value range
TrG	Temperature range above maximal value
FUS	Phase / fuse error Fuse failure (see chapter ↗Sicherungsausfall FUS) / phase missing

✸ Storing alarm, has to be acknowledged

Information display	System error profiTEMP Description
ERR	Channel data error Trouble Shooting see service manual
SYS	System data error Trouble Shooting see service manual
hSE	Heat sink temperature alarm Heat sink temperature too high Trouble Shooting see service manual
CAn	Communication error CAN bus internal Trouble Shooting see service manual

Information display	Status Messages profiTEMP Description
OFF	Actuator deactivated Actuator disconnected / Zone is passive (at heating release ON)
Dri	Identification error (temperature drift too large) Drift error at identification
IdE	Identification error Error during identification

Id	Identification heating active Identification heating active
PLn	Learning phase process control Learning phase process control active
PrO	Process monitoring is not active yet Process monitoring not active yet
PAL	Process alarm
ErF	Error external reference junction External reference alarm

Information display	**Status Messages** **profiTEMP Description**
MAn	Manual mode
SbY	Standby Zone in Standby mode
bST	Boost Zone in Boost mode $_{1)}$
dIA	Diagnostics MoldCheck (diagnostics) active
HnD	Heat‘n‘Dry
StA	Start-up Mode Startup operation active $_{1)}$
rAP	Temperature Ramp Manual temperature ramp active
Ar.	Automatic ramp and slowest zone Automatic ramp active. Marking slowest zone
Ar	Automatic ramp Automatic ramp active
CoU	Leading zone active Leading zone manual mode $_{2)}$

LED display second line $_{1)}$ display of time and/or $_{2)}$ display of number of leading zone

	Status Messages **profiTEMP Description**
	Zone
	Zone in control mode
	Current setpoint value is not set yet
	Start-up mode Boost
	Boost time driven started
	Heat sink limit value

10.6.2Information displays TEMP-Command

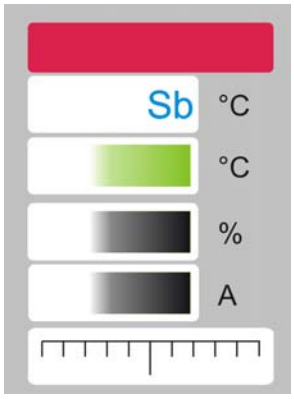
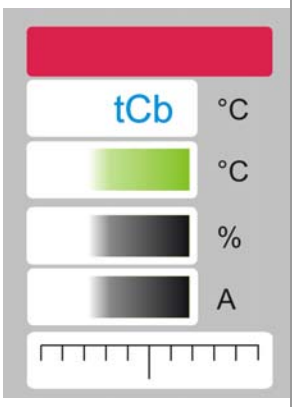
Information display	TEMP-Command	Description
PAL		The value set for tolerance of process monitoring PTOL was exceeded, an alarm is output.
mA	Manual mode	
tCP	Sensor incorrect polarity	Sensor connection interchanged. Change the sensor wire + and – of the corresponding zone.
tCb	Sensor break	Defective sensor. In order to keep on operating zones in the standard operating mode, replace sensors immediately. Otherwise switch zones into manual mode or leading zone mode and keep on working with defect sensor.
IdE	Error at identification	
drI	Drift error report during identification phase	Signal during beginning of the identification phase possible. Disappears by itself. After that zone changes into identification phase with signal Id.
Id	Heating identification active	
IdC	Cooling identification active	
IdS	Starting phase identification cooling	
AL	Alarm measuring range exceeded	Actual value of the zones has exceeded the measuring range's upper limit or the maximum temperature (500°C). Error is stored and must be confirmed. If the error report appears prior to error report I-, a defect of the solid state relay of the zone is possible. Please replace. Also:Error on sensor possible. Please observe actual value. Get in touch with PSG.
rAP	Manual temperature ramp active	
SP2	Reduction to 2nd setpoint value	
SP3	Reduction to 3rd setpoint value	
SP4	Reduction to 4th setpoint value	
bSt	Boost function active (relative setpoint value increase)	bSt alternates with the set time for timer, when the Boost function is time controlled.
SbY	Temperature reduction/ standby active (relative setpoint value increase)	
StA	Startup operation active	If the controller is in startup operation mode, the remaining startup time (in minutes) is displayed alternately with the current message.
FAL	Sensor alarm	
LiO	Actuator deactivated	
OuT	Zone switched off	
CoU	Leading zone manual mode	
ArE	Automatic ramp error	

ArE.	Automatic ramp error (slowest zone)	
Information display	**TEMP-Command**	**Description**
Ar	Automatic ramp	
Ar.	Automatic ramp (slowest zone)	
CAn	CAN communication fault (CANAIN)	Possible sources of errors: Address setting or setting of transmission speed do not match at the devices or defective CAN interface. Get in touch with PSG.
CtC	Error configuration (CANCT Configuration)	The configuration table in the master component and in the connected sub components (z.B. baci, dio16ci, canct, do16, etc.) does not match.
Ctb	Error PSG bus (RS485 on CANCT Bus)	Bus error (e.g. on baci, canct, etc.) to actuator modules. See connectors of components.
Err	Error in channel data	Change to parameter level, change a value and confirm the change. The error message disappears.
SyS	Error in system data	
PLn	Learning phase active	
PrO	Process monitoring not active yet	
HnD	Heat'n'Dry	Function active
Cur	Leakage current error	
CtA	Current tolerance error	
Pot	Potential error on the sensor	
mAG	Group manual mode	
dIE	Diagnostics end	
dIA	Diagnostics active	
dEr	Diagnostics error	
I-	Thyristor alarm (TA)	A heating current is measured although the solid state relay is not control-activated by the controller. Check solid state relay and replace.
FuS	Short on the heating output	Wiring error, error is stored and must be confirmed.
PhA	Phase error	At least one mains network phase is missing.
hSE	Heat Sink Error	Heat sink temperature too high.
GPO	Bypass group release	
GP	Zone waits for group release	
GPL	Zone waits for group release	… and controls on standby values until then.
010	Read MMC error	
011	Write MMC error	
LdE	Load Error	Error when loading hex file via MMC card.
Ld	Load	Loading hex file over MMC card active.

Technical changes reserved

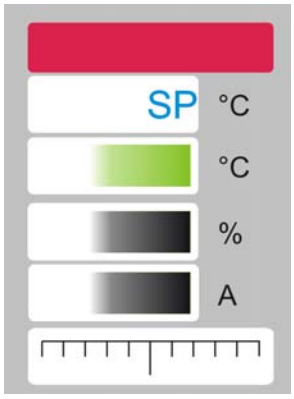
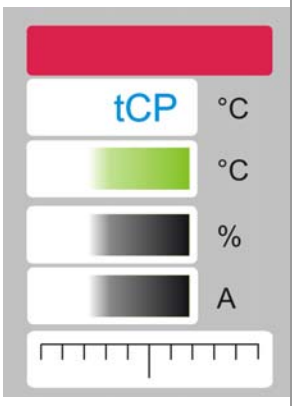
11 Error Messages - Trouble Shooting

11.1 Sensor break pT: Sb and/or TC: tCb

TEMPSoft2 pT	TEMPSoft2 TC	
		A sensor break is a disconnection in the sensor circuit where the sensor wire is squeezed somewhere in between sensor and controller.
How it works		After detection of an error an error message is immediately output and the heating of the corresponding zone is switched OFF (|pT[P003] Output value = 0 |TC[P002] Output value = 0|).
What good is it		The alarm sensor break provides the user with a specific reference to an error in the hot runner or the wiring, and provides the ability to pinpoint errors quickly and correct it.

Remedy	Reason	Trouble Shooting
	Sensor break	Check the connected sensors ■ Check connecting cable of hot runner controller ■ Check sensor input

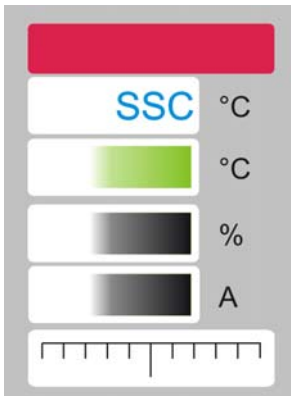
11.2 Sensor incorrect polarity pT: SP and/or TC: tCP

TEMPSoft2 pT	TEMPSoft2 TC	
		Sensor incorrect polarity means, that the thermocouple is connected with the wrong polarity to the controller.

How it works	Due to the incorrect wiring, the controller measures a faulty actual value. For not yet heated tool, the fault is not visible. Only when the zone is heated up, the error is immediately detected and an error message displayed.
What good is it	The alarm sensor incorrect polarity provides the user with a specific reference to an error in the hot runner or the wiring, and provides the ability to pinpoint errors quickly and correct it.

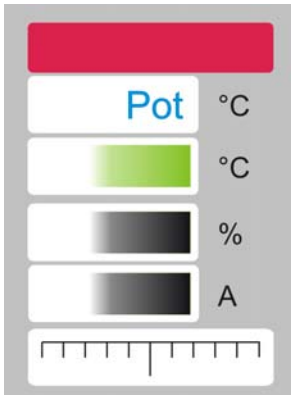
Remedy	Reason	Trouble Shooting
	Sensor incorrect polarity	Check the connected sensors ▪ Check sensor connection +/-

11.3 Sensor alarm SSC

TEMPSoft2 	Under a sensor alarm, we understand the case, where a) the sensor wire is squeezed somewhere in between sensor and controller and a short circuit exists b) the sensor is not in the intended position (removed or is swapped with another).
How it works	Through the defect in the cable to the controller a low temperature value is forecast. The actual temperature is much higher than the measured temperature. If there is no rise in temperature measured in a zone type (considered nozzles and manifold) in a dependent time, a sensor alarm is displayed to the operator. To prevent damage to the appropriate zone, the heating is turned OFF (|pT[P003] Output value = 0 |TC[P002] Output value = 0|). A sensor alarm can be faulty, and that is when the heat output of the zone is too small. It shows an identical error image.
What good is it	The sensor alarm provides the user with a specific reference to an error in the hot runner or the wiring, and provides the ability to pinpoint errors quickly and correct it.

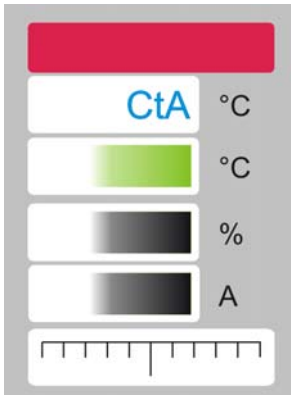
Remedy	Reason	Trouble Shooting
	Short circuit in sensor circuit	Check the connected sensors ▪ Check connecting cable of hot runner controller
	Sensor position	Check position

11.4 Potential error Pot

TEMPSoft2 	On the sensor input a too high voltage is detected.
	Status LED's on Hot Runner Controller Card HCC06/16: Blinking cycle **RED** ERR-LED: 1-fold blinking cycle, short pause, ... (on power controller card, that has detected the potential error) Blinking cycle **RED** ERR-LED: 2-fold blinking cycle, short pause, ... (on power controller card, that is switched-off due to a potential error on another power controller card)
How it works	Error is detected by the hardware on the power controller card.
What good is it	For protection all zones get de-energized (relay on power controller card OFF), also the zones on the other power controller cards, due to the voltage may come from any zone.

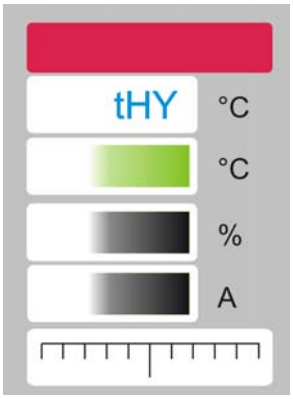
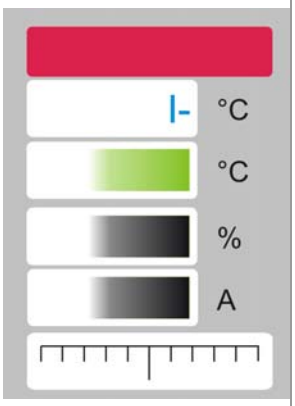
Remedy	**Reason**	**Trouble Shooting**
	Error on tool	Check sensor input Check grounding/sensor

11.5 Current tolerance error

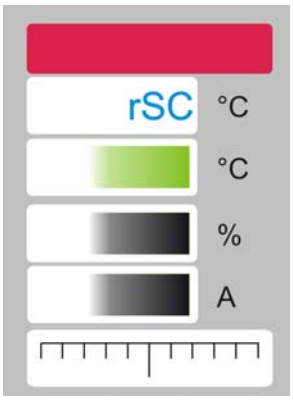
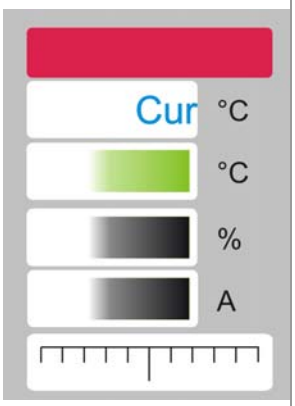
TEMPSoft2 	A current tolerance error, indicates, that the measured heating current is outside the tolerance band for the zone compared to the reference value (current setpoint value) set.
How it works	The hot runner controller measures the currents through the heaters continuously and compares these to the reference values, the current setpoint values. This can be specified manually or automatically by call of the function current transfer. A current tolerance error indicates either a partly breakdown of the heater or that the current setpoint values were not yet set after a change of the connection controller and hot runner.
What good is it	The current tolerance error provides the user with a specific indication of the error in the hot runner or of a wrong setting, and provides the ability to pinpoint errors quickly and correct it.

Remedy	**Reason**	**Trouble Shooting**
	Ground fault	Check Heating
	Sensor at heating output	Check wiring system
	Tool changing without current transfer	Execute current transfer

11.6 Thyristor alarm pT: tHY and/or TC: I-

TEMPSoft2 pT	TEMPSoft2 TC	
		A thyristor alarm indicates a defective component in the hot runner controller.
How it works		The hot runner controller checks the measurement of the heating currents, whether a power controller (thyristor) is uncontrolled heated in the hot runner controller due to a defect. Since this is a critical error case which can damage the heating circuit due to overheating, the heating circuit is immediately switched off (relay on power controller card OFF).
What good is it		The thyristor alarm primarily protects the heater against temperature excess, which causes an electric damage in the heater and replacement of the heater. It provides the user with a specific reference to an error in the hot runner and provides the ability to correct it quickly.
Remedy	Trouble Shooting see service manual	

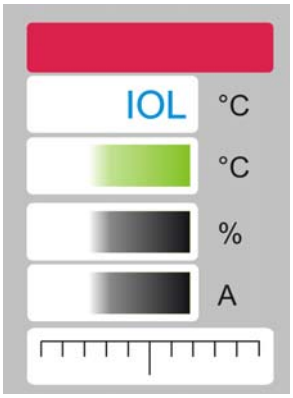
11.7 Residual current pT: rSC and/or TC: Cur

TEMPSoft2 pT	TEMPSoft2 TC	
		The residual current (see |pT[SP05] Max. residual current|TC[SP22] Limit for Switching-off leakage current|) set was exceeded for the Hot Runner Controller Card HCC06/16 and the Heatings were de-energized (relay on power controller card OFF).
		Status LED's on Hot Runner Controller Card HCC06/16: Blinking cycle **RED** ERR-LED: 4-fold blinking cycle, short pause, ...

How it works	On the power controller card the residual current for all 6 zones is determined.
What good is it	The residual current provides the user with a specific indication of the error in the hot runner or of a wrong setting, and provides the ability to pinpoint errors quickly and correct it.

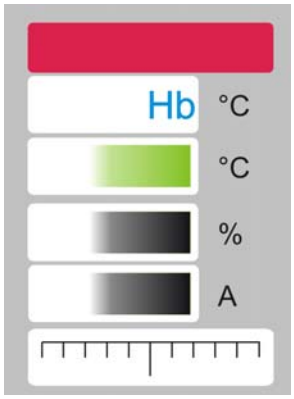
Remedy	Reason	Trouble Shooting
	Tool humid	Check tool on humidity ▪ Current to ground due to humidity
	Limit value wrong	Check settings for limit value and adjust it, if necessary

11.8 Current alarm IOL

TEMPSoft2 	On the Heating output a short circuit was detected.
	Status LED's on Hot Runner Controller Card HCC06/16: Blinking cycle **RED** ERR-LED: 3-fold blinking cycle, short pause, ...
How it works	At switch-on of the zone the heating current is controlled. Is a defined limit exceeded, there may be a short-circuit. The Heating circuit is de-energized (relay on power controller card OFF).
What good is it	A current alarm with subsequent disconnection avoids damage on the device and provides the user with a specific indication of the error in the hot runner.

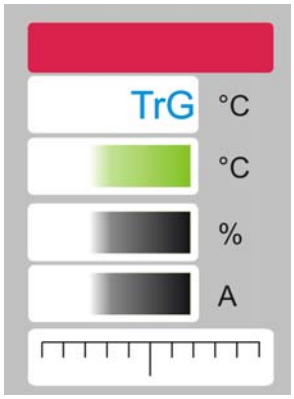
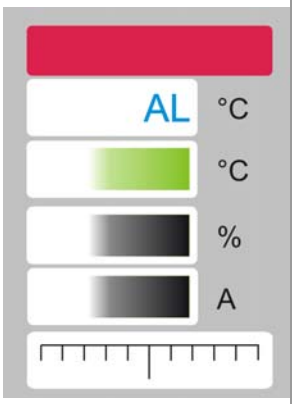
Remedy	Reason	Trouble Shooting
	Heating overloaded	Check Heating Check wiring system

11.9 Total breakdown of heater Hb

TEMPSoft2	
	Total breakdown of heater is an alarm message in hot runner controllers. It is output additional with the current alarm, when a break is detected in the heating circuit, i.e. no heating current is measured.
How it works	Indicates the user a disconnection in the heating circuit. The heating current determines a heating current of 0.0 A.
What good is it	The alarm total breakdown of heater provides the user with an additional specific reference to an error in the hot runner or the wiring, and provides the ability to pinpoint errors quickly and correct it.

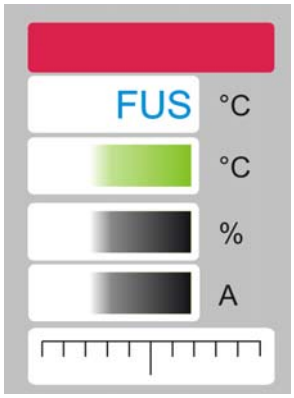
Remedy	Reason	Trouble Shooting
	Wiring	Check wiring system
	Heating	Check heating, measure resistance

11.10Temperature alarm pT: TrG and/or TC: AL

TEMPSoft2 pT	TEMPSoft2 TC	
		A temperature alarm is generated, when the actual temperature value exceeds the parameter |pT[P010] Upper setpoint value limit|TC[P013] Upper setpoint value limit| +5K for more than 5 seconds. The Heating of the concerned zones is switched-off (|pT[P003] Output value = 0 |TC[P002] Output value = 0|).
How it works		The parameter should be adjusted dependent on the measurement range of the used thermocouple.
What good is it		A temperature alarm with subsequent disconnection avoids damage on the device and provides the user with a specific indication of the error in the hot runner.

Remedy	Reason	Trouble Shooting
	Partial failure of sensor	Incorrect actual value display, but no sensor short-circuit ▪ Check sensor, exchange if necessary

11.11Fuse failure FUS

TEMPSoft2 	The hot runner controller controls the status of fuses in the heating circuit and output an error message in case of an defective fuse.
	Status LED's on Hot Runner Controller Card HCC06/16: **RED** ERR-LED continuous light; **RED** FUS-LED continuous light of the zone concerned.
How it works	Each zone has a LED, which shows the failure of the fuse in the heating circuit.
What good is it	The alarm fuse failure provides the user with a concrete information on the error. He can remove this without deviation and delay.

Remedy	Trouble Shooting see service manual

12 Trend

Description	The graph in form of a trend is recorded for setpoint value, actual value and output value of each zone. In the trend up to 16 zones are displayed simultaneously to the operator.
How it works	The data is recorded for all zones of the active hot runner controller. The data is stored in a circular buffer. This provides a data capacity of approximately 48 hours. With filled circular buffer in data recording, the oldest data will be overwritten.
What good is it	The course of the values is recorded and can be analyzed easily.

Up to 16 zones can be displayed simultaneously in the trend. Is a further zones selected, a message appears.

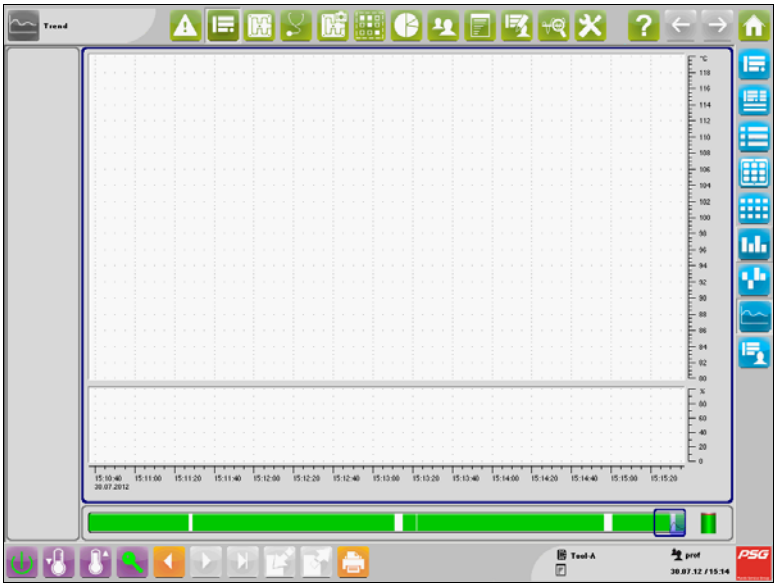
If the settings in the configuration changes (e.g. changes in the number of zones), all the trend data is discarded and the recording starts again.

12.1 Call trend

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

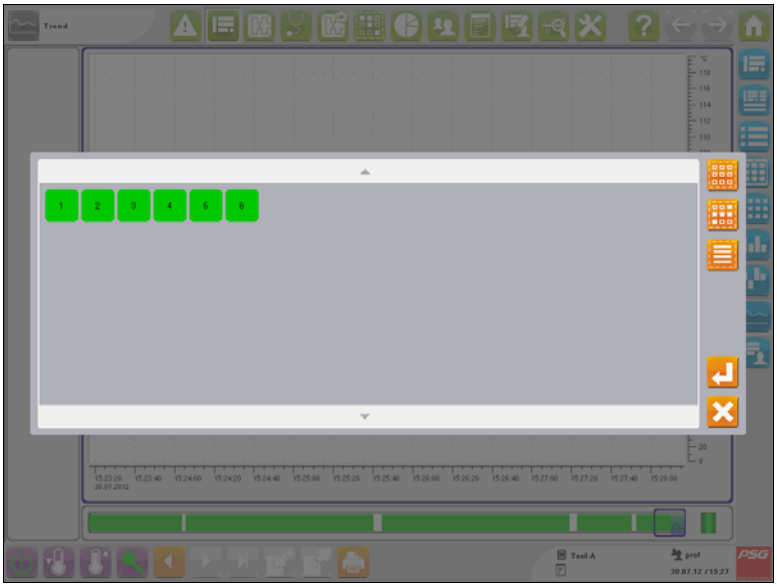
Call trend

Press key



In the basic state, the trend curves are not displayed. First zones must be selected for display.

Click in drawing area.



Procedure to select zones see chapter ↗Zone selection.

The zones 1-6 are individually selected.

Confirm

In the upper area, the actual value and the setpoint value, and in the lower area the output value of zone 1-6 are displayed.

Scroll time scale backwards

Scroll time scale forwards

Go to the end of the time scale to the current data (got to)

To highlight a trend in the display, press a zone key left.

To reset the highlighting, press the key again or press another zone key.

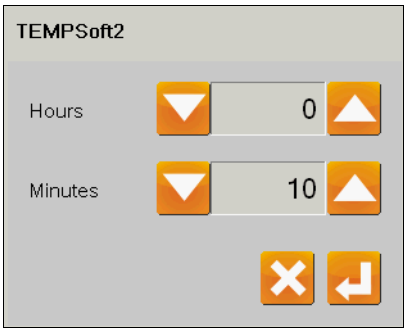
The container on the right lower side shows the filling status of the ring buffer, and the actual storing position (red line).

With the slider, the positions in the circular buffer can be indexed, where data for the trend display (green) is available.

The frame of the slider indicates the area displayed in the drawing area.

The following examples are based on see chapter ↗TEMPSoft2 Setting - Program settings ↗Input Mode = Decade switch

12.2 Trend - Change scaling of X axis

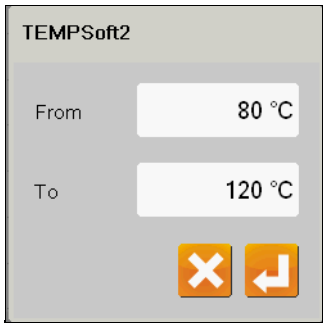


Select X axis for time and change scaling.
Input box opens

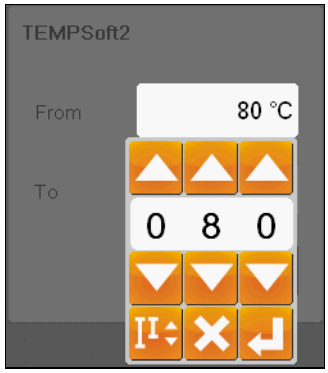
Change numerical values by up/down key

Confirm

12.3 Trend - Change scaling of Y axis



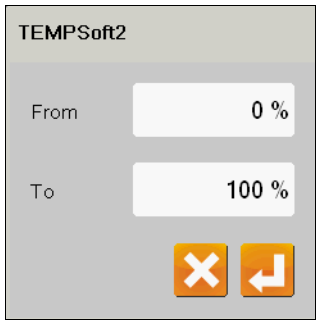
Select Y axis for actual value, setpoint value (upper Y axis) and change scaling.



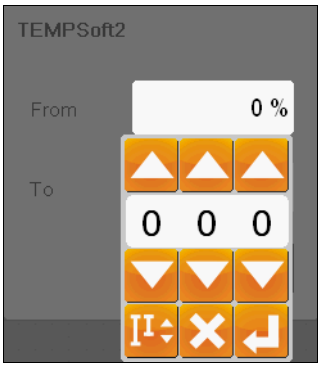
Select numerical box From and/or To
Input box opens

Change numerical values by up/down key

Confirm



Select Y axis for output value (lower Y axis) and change scaling.



Select numerical box From and/or To
Input box opens

Change numerical values by up/down key

Confirm

12.3.1Print trend

Call function

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

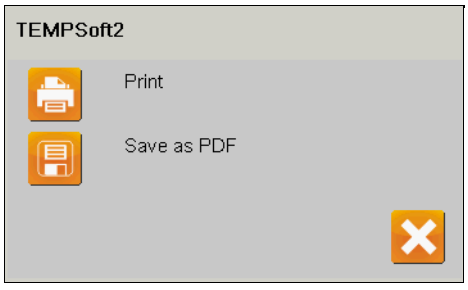
Press key

Dependent of printer setting

See chapter ↗Printer settings

Login as **admin**
See chapter ↗Login/Logout

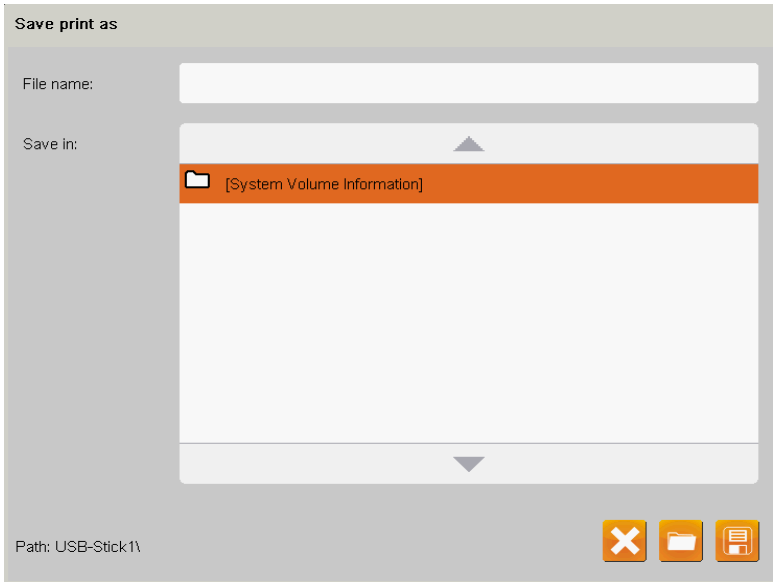
Is NO printer selected and no USB stick connected, a message is shown an the function is canceled.



PRINTER installed

Trend is printed on this printer,

and/or stored as PDF file on USB stick.

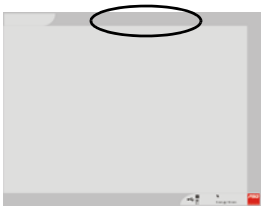


NO printer selected and/or stored as PDF file on USB stick.

Trend is stored as file on a USB stick with the here specified name (to change the name select the name field).

Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Start saving	Press key
After completion of the dialogue, the status of the save is displayed.	

13 MoldCheck



Call MoldCheck

Description 	MoldCheck is a complete diagnosis of electric conditions of the hot runner and the corresponding peripherals.
How it works	The MoldCheck function is triggered by the operator. Beside the full wiring control "Is no thermocouple connected to the heating output?" a functional check of heaters and sensors is run. The function is ideal for tool makers and service departments, that have to guarantee their customers and/or colleagues a 100% function of the electrical system of the hot runner, as well as for the molders, who will control the status of the hot runner before installation of the tool on the machine.
What good is it	Early enough analysis can reduce downtimes before production. Electrical control of the hot runner is possible without specialized knowledge. The function provides concrete information for improvement and trouble shooting.

Change setting		The visible and therefore operable functions for the user are assigned by ↗User Administration.
		See ↗Change waiting time.

13.1 Call MoldCheck

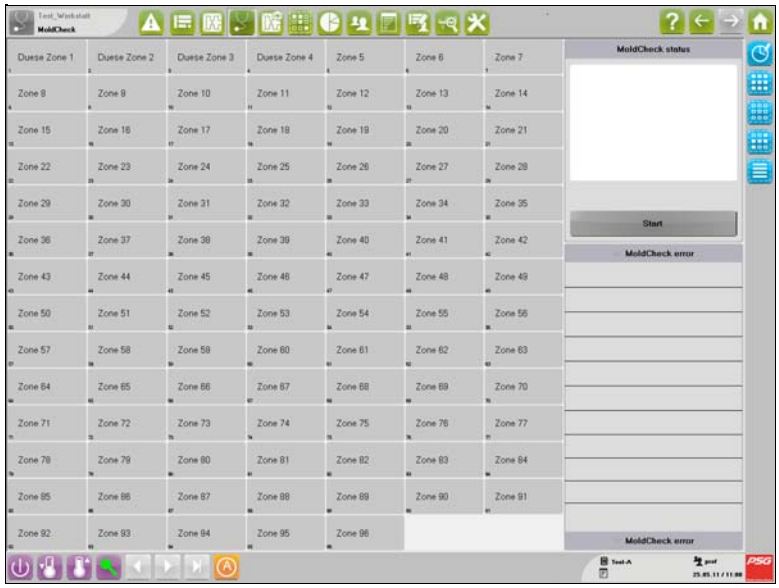
As soon as MoldCheck is started, the whole function must be run through. Is MoldCheck ended after complete course and storage of result files by call of another menu item, the saved result can be seen again in the tool management (see chapter ↗MoldCheck result).

Was MoldCheck canceled by the user due to any reasons (see chapter ↗Cancel MoldCheck), MoldCheck must be started again and completely run through, to get a result.

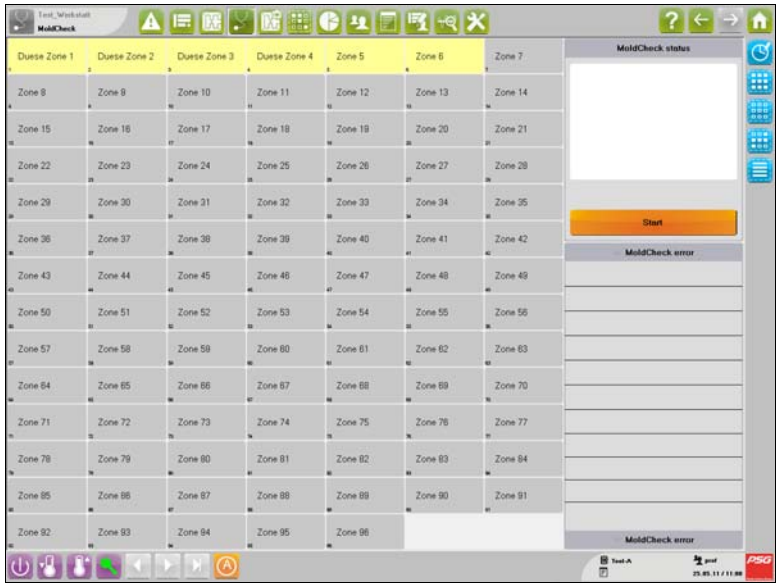
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Call MoldCheck

Press key



At call of function MoldCheck all zones are shown. To change the waiting time see chapter ↗Change waiting time

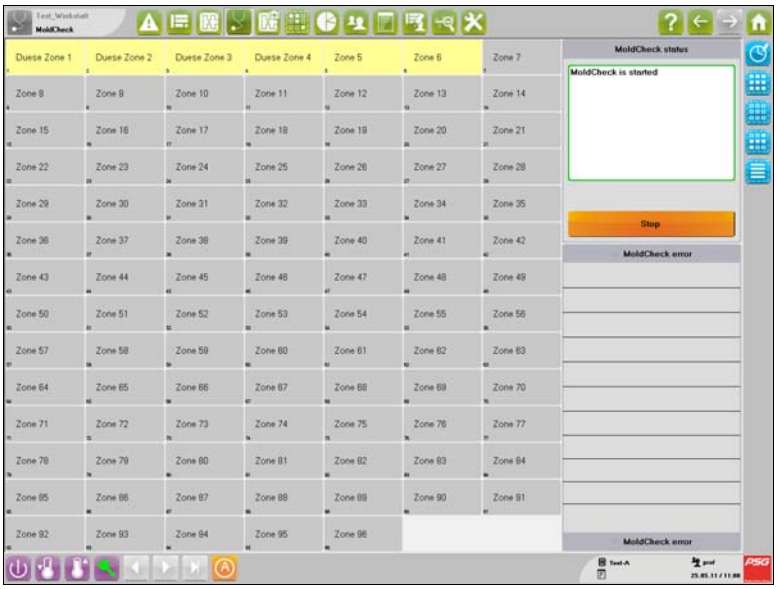


Procedure to select zones see chapter ↗Zone selection.

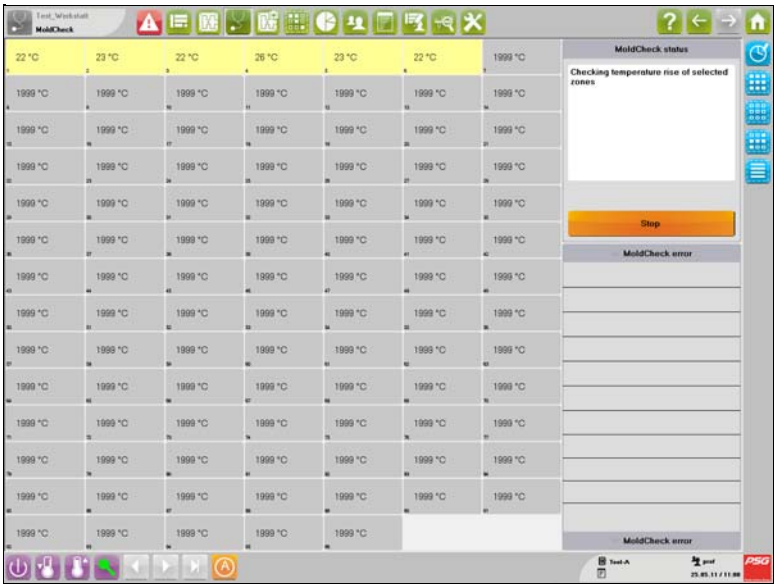
The zones 1-6 are individually selected.

As soon as one zone is selected, the start key is activated.

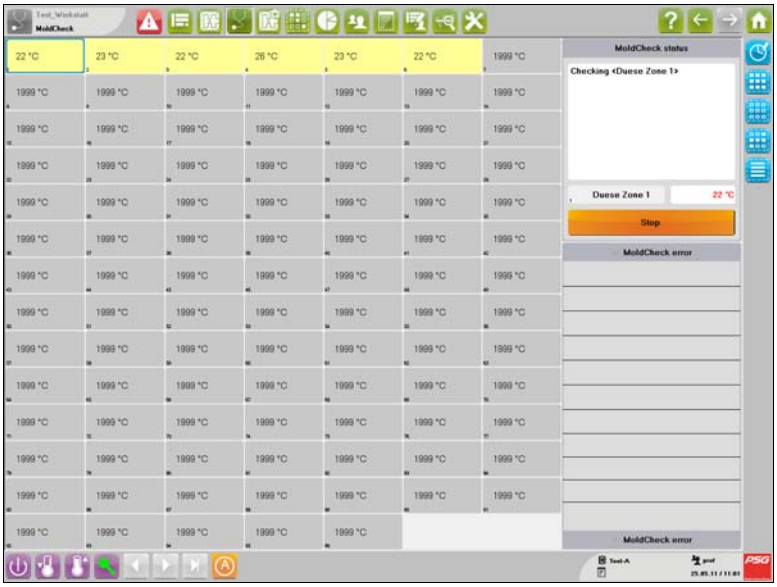
Start MoldCheck



The START of the function Mold-Check is shown in the sta-tus MoldCheck sta-tus.

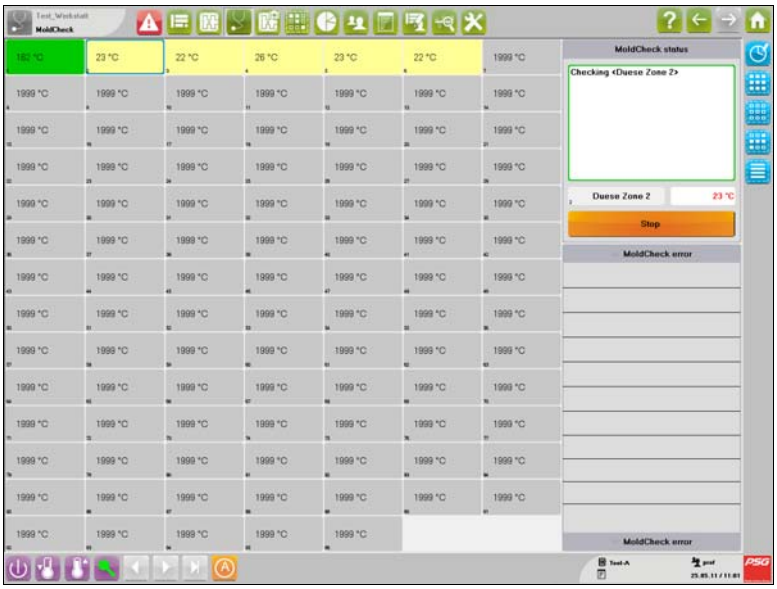


For all selected zones (here 1-6) the temperature rise is checked.



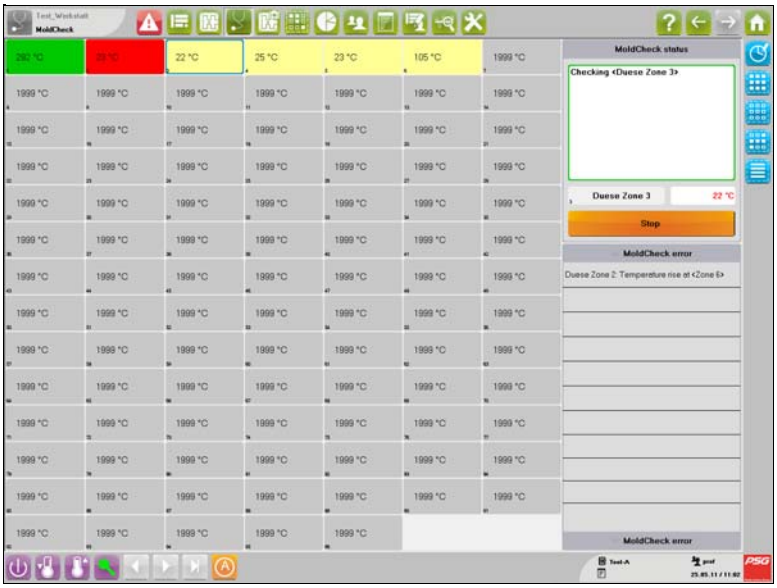
Each zone is individually checked thereafter.

The actual temperature value is shown.



After check of an individual zone, the zone is color coded (**green** = OK, **red** = error). Detected errors detected are consecutively shown in the display field MOLDCHECK ERRORS down right.

The zone 1 shows NO errors (**green** tagged).



The zone 2 shows an error (**red** tagged).

The error is described in the display filed MOLDCHECK ERRORS down right.

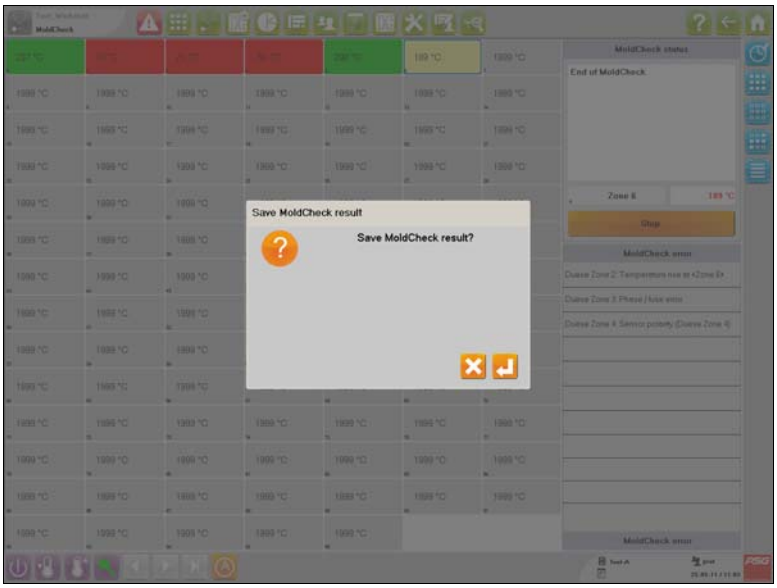
The check continues until zone 6.

The zones are color coded and the error is described in the display filed MOLDCHECK ERRORS down right.

13.2 Save MoldCheck result

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Sub-step in process of MoldCheck

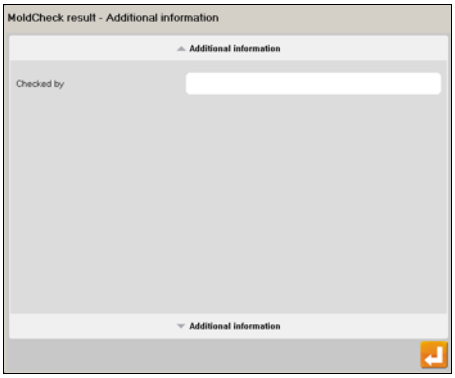


Is the function MoldCheck completed for all selected zones, the result of the diagnosis can be saved in a file.

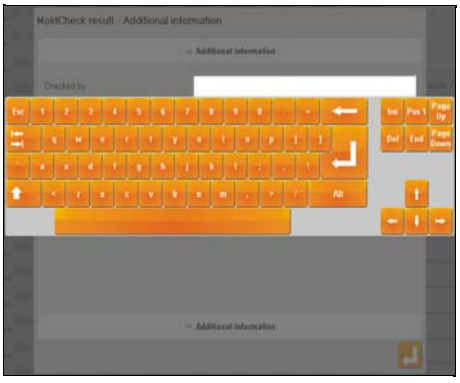
Confirm

The user **admin** can assign fields with **Additional** Information for the printed MoldCheck results, which are shown to the user at storing of the MoldCheck results and must be filled in (see chapter ↗MoldCheck additional information).

Additional information



Input box opens



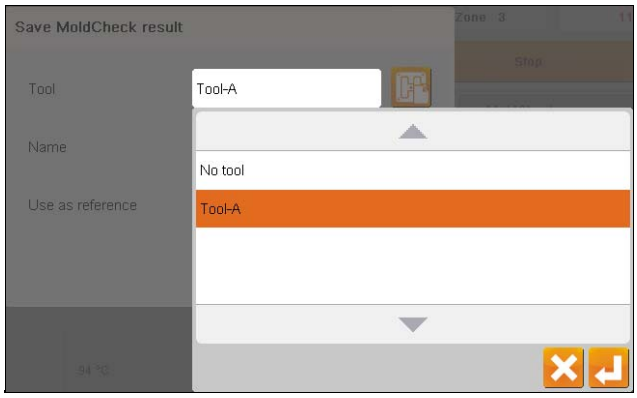
Select field.

Enter a text using the visual keyboard.

Confirm

Additional information only in printout (PDF-File) visible.

Additional information



Store

...with **another** tool.

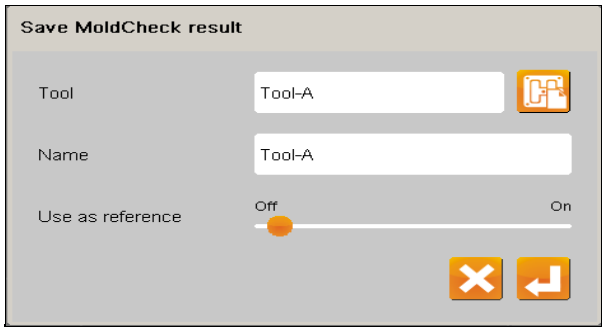
Select another tool.

Confirm.

...with **a just created** tool.

Enter the name of the new tool by using the visual keyboard

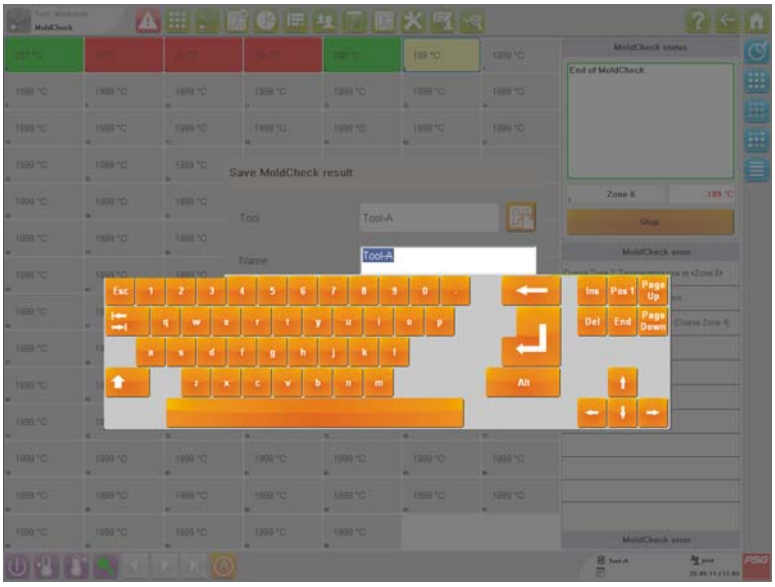
Confirm



...with the tool specified.

Select field NAME.

By saving the result files, they can be defined as references for comparison (see also chapter ↗Reference).



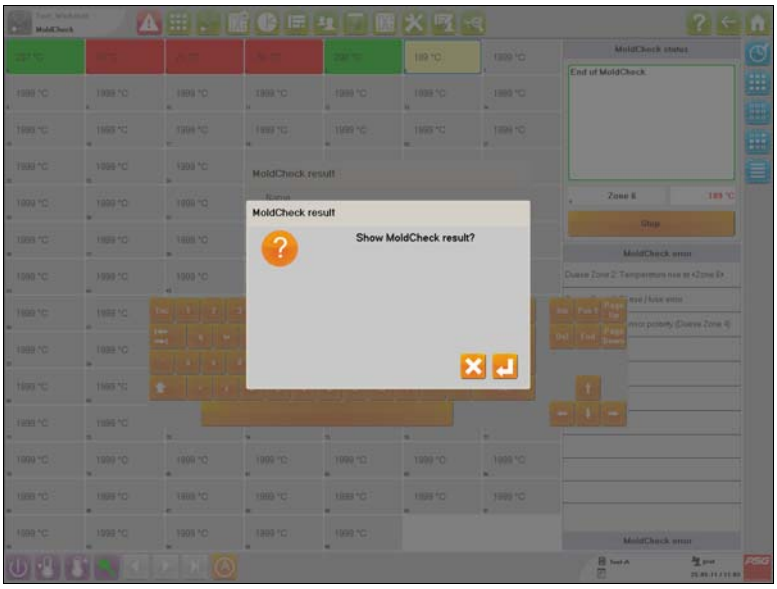
Enter the name using the visual keyboard.

Confirm

13.3 Show MoldCheck result

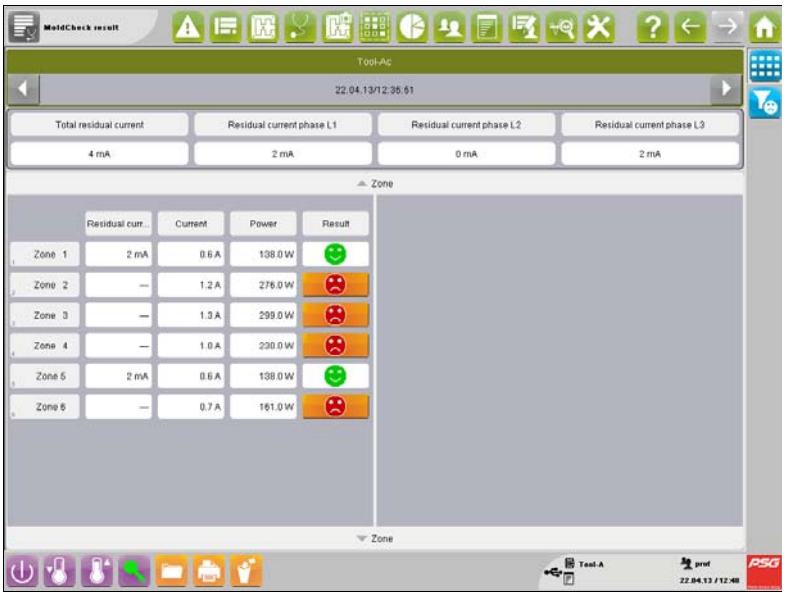
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Sub-step in process of MoldCheck



The result of MoldCheck can be shown.

Confirm

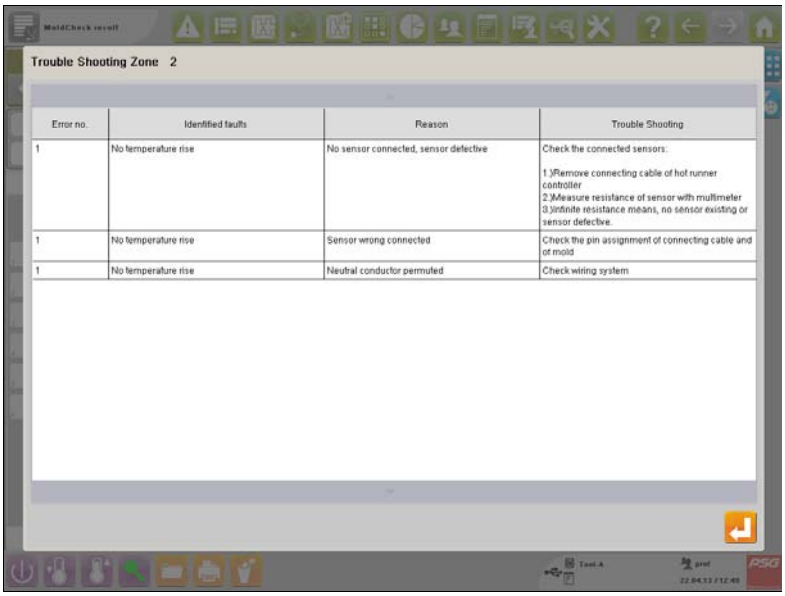


The presentation of the result is very simple.

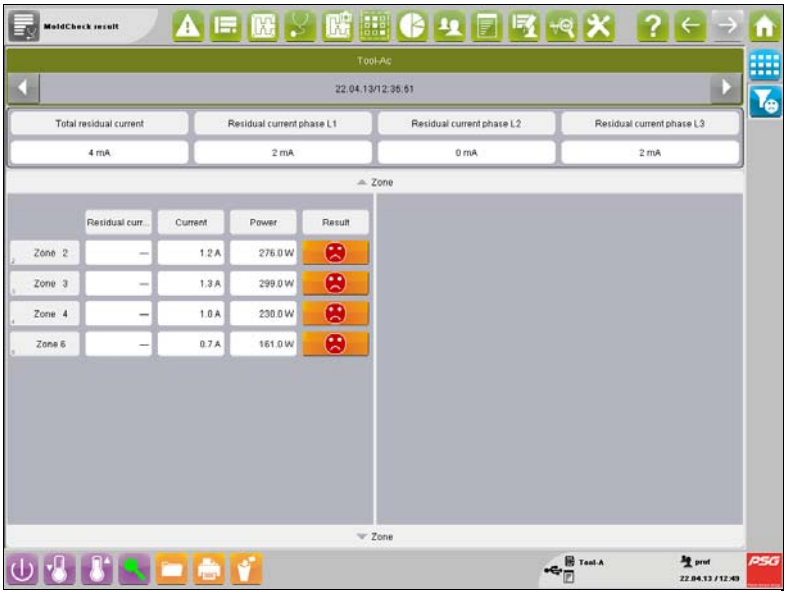
means, everything **OK**.

means, there is **at least 1 error**. By selection of the key opens a window with detailed messages to ↗MoldCheck Trouble Shooting for each erroneous zone.

means, **Check canceled**.



Example for window trouble shooting zone 2.

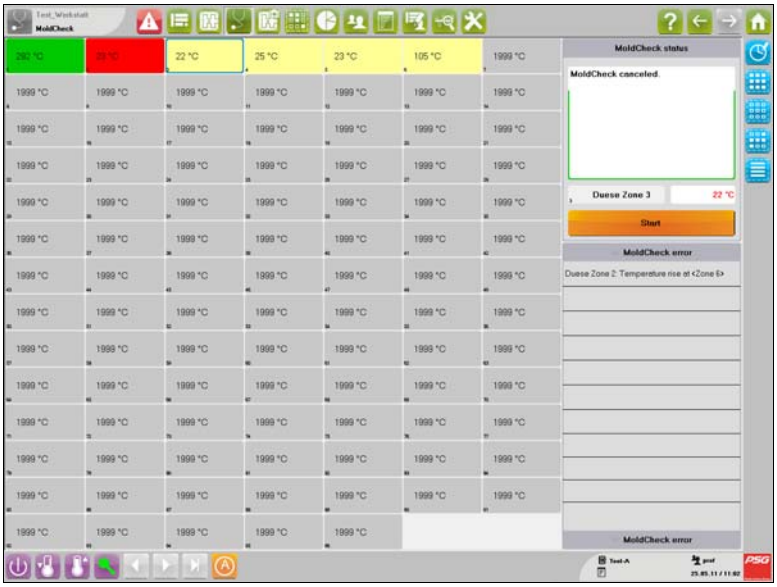


By the filter key the result presentation of MoldCheck can be reduced to the zones with errors and canceled check.

By this key all results are shown again.

13.4 Cancel MoldCheck

General ...

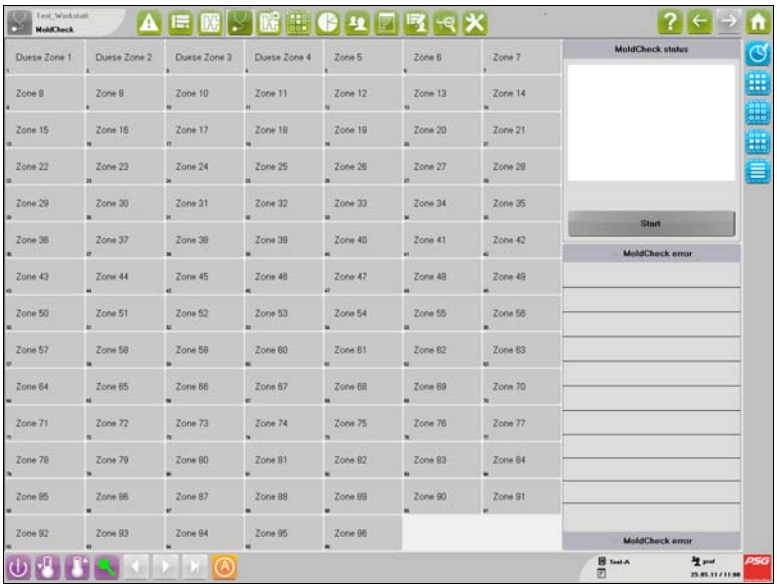


... the function MoldCheck can be canceled by the STOP key every time. There is no result available to save.

The function MoldCheck was canceled (see display in Mold-Check status)

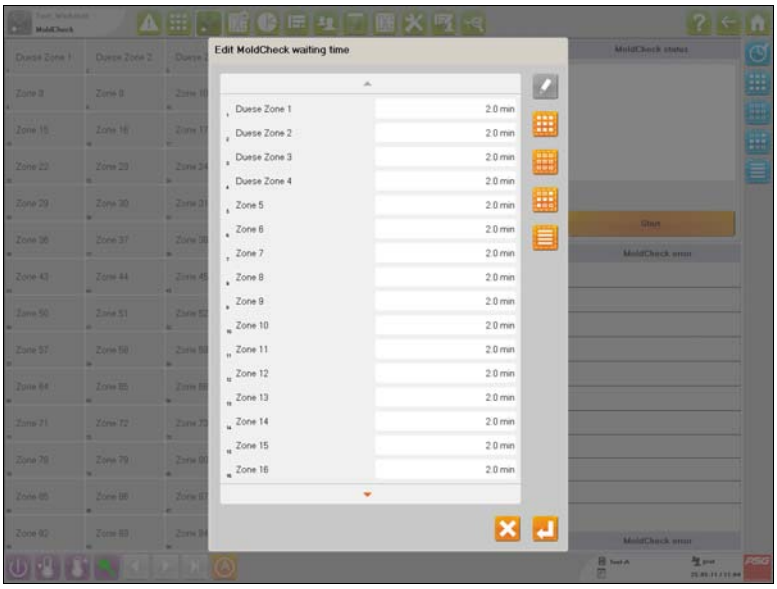
13.5 Change waiting time

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.



At call of function MoldCheck all zones are shown. To change the waiting time, proceed like follows.

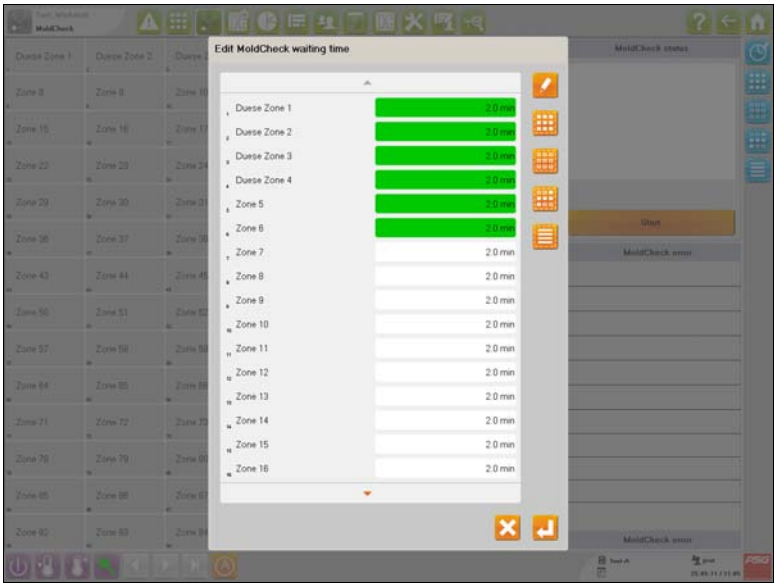
Press key


Edit MoldCheck waiting time
Duese Zone 1 2.0 min
Duese Zone 2 2.0 min
Duese Zone 3 2.0 min
Duese Zone 4 2.0 min
Zone 5 2.0 min
Zone 6 2.0 min
Zone 7 2.0 min
Zone 8 2.0 min
Zone 9 2.0 min
Zone 10 2.0 min
Zone 11 2.0 min
Zone 12 2.0 min
Zone 13 2.0 min
Zone 14 2.0 min
Zone 15 2.0 min
Zone 16 2.0 min

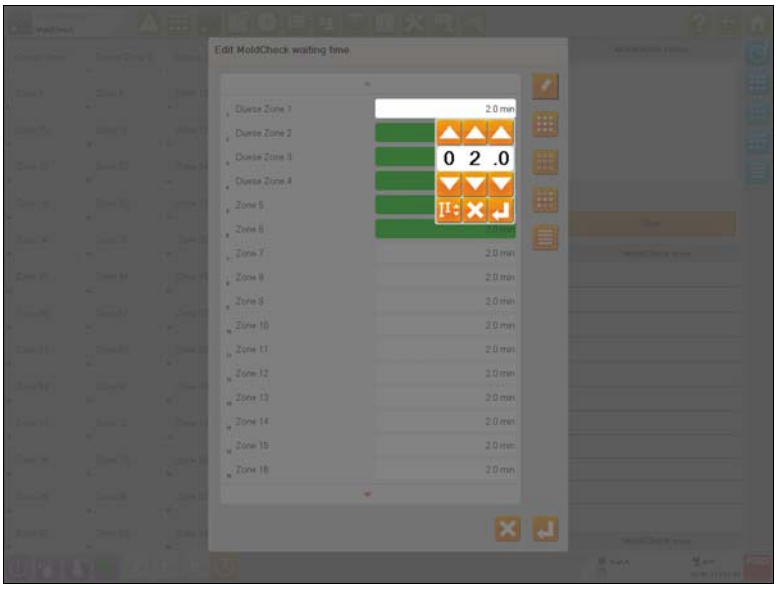
The waiting time can be changed.

Procedure to select zones see chapter ↗Zone selection.

The zones 1-6 are individually selected. The waiting time is set to 2.1.

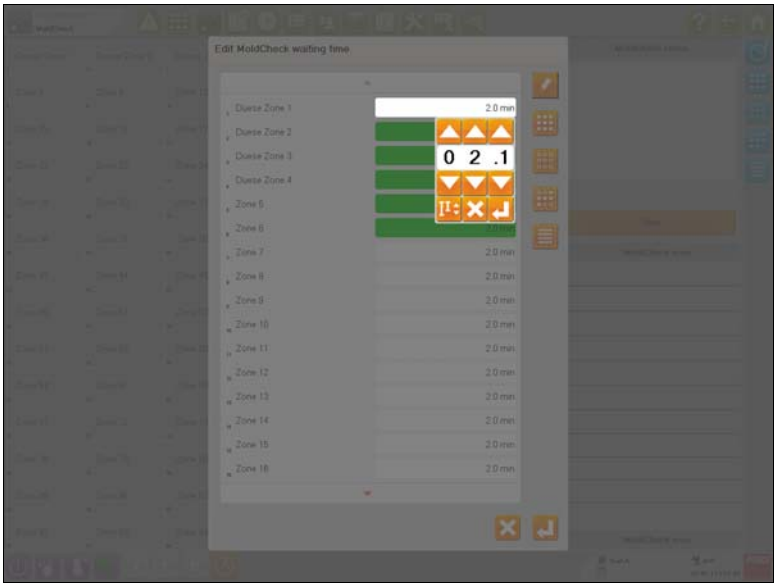

Edit MoldCheck waiting time
Duese Zone 1 2.0 min
Duese Zone 2 2.0 min
Duese Zone 3 2.0 min
Duese Zone 4 2.0 min
Zone 5 2.0 min
Zone 6 2.0 min
Zone 7 2.0 min
Zone 8 2.0 min
Zone 9 2.0 min
Zone 10 2.0 min
Zone 11 2.0 min
Zone 12 2.0 min
Zone 13 2.0 min
Zone 14 2.0 min
Zone 15 2.0 min
Zone 16 2.0 min

Edit parameter for selected zones.



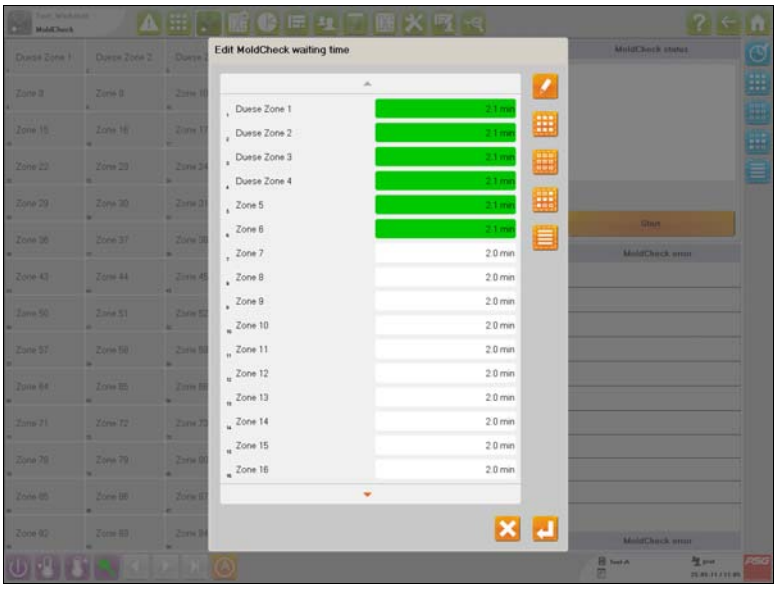
Input box opens

Change numerical values by up/down key



Set numerical value to 2.1

Confirm


Edit MoldCheck waiting time
Duese Zone 1 2.1 min
Duese Zone 2 2.1 min
Duese Zone 3 2.1 min
Duese Zone 4 2.1 min
Zone 5 2.1 min
Zone 6 2.1 min
Zone 7 2.0 min
Zone 8 2.0 min
Zone 9 2.0 min
Zone 10 2.0 min
Zone 11 2.0 min
Zone 12 2.0 min
Zone 13 2.0 min
Zone 14 2.0 min
Zone 15 2.0 min
Zone 16 2.0 min

The waiting time for the zones 1-6 is set to 2.1.

Close dialog

Continue with ↗MoldCheck

13.6 MoldCheck Trouble Shooting

After the complete diagnosis of electric conditions of the hot runner and the corresponding peripherals by the function MoldCheck, references for trouble shooting are given for the erroneous zones.

The MoldCheck references for trouble shooting are presented as follows:

Error number. - consecutive number per zone and error type for identification

Identified error – short description of error type

Reason – possible reason of error

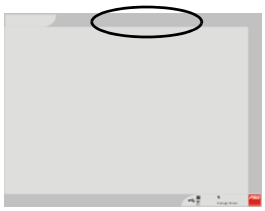
Trouble shooting – Detailed description for trouble shooting

The following table gives an overview of possible references of Mold Check.

Identified faults	Reason	Trouble Shooting
Short circuit	Power of connected heater is higher than connected load of output.	Check wiring of sensor and heating on permutation. Control heater. ■ Remove connecting cable of mold ■ Measure resistance of heating with multimeter ■ Read power value off table in Operating Instructions Hot Runner Controllers and compare it with the connected value of the heating output
Short circuit	Short circuit on power output	Check feed line for short circuit. ■ Remove connecting cable of hot runner controller ■ Measure resistance at terminal with multimeter ■ For resistor equal 0 Ohm Damage in cable or in feed line of heater in the mold - Remove connecting cable from the mold - Measure resistor with multimeter - For resistor equal 0 Ohm - Damage in feed line of heater of mold
Residual current error	Insulation resistance of heater too low, e.g. by humidity in heating element	Single zones - execute MoldCheck again. Where fault continues to exist, exchange heater.
Potential error at sensor input	Measurement signal for sensor input too big.	Check the wiring and the state of the heating element concerning conductive connection between heater and sensor.
No temperature rise	No sensor connected, sensor defective	Check the connected sensors: ■ Remove connecting cable of hot runner controller ■ Measure resistance of sensor with multimeter ■ Infinite resistance means, no sensor existing or sensor defective.
No temperature rise	Sensor wrong connected	Check the pin assignment of connecting cable and of mold.
No temperature rise	Neutral conductor permuted	Check wiring system
Temperature rise in spite of switched off heating	Power output defective	Check actuator card

Identified faults	Reason	Trouble Shooting
Mains phase missing	The mains phase to control the power output is not connected or the appropriate fuse was triggered.	Open hot runner controller. Are the red LED's flashing on all power controller cards? Yes: ■ Check main fuse and exchange defective fuses ■ Check power cord No, only on the appropriate power controller card of the zone: ■ Switch-off power supply ■ Lock card Red LED still flashing: exchange power controller card
Measured current with switched off heating	Power output defective	Exchange power controller card of the appropriate zone.
No current measured	No heater connected	Check the connected heating element ■ Remove connecting cable of hot runner controller ■ Measure resistance of heating with multimeter "Infinite" resistance means, no heating element found
No current measured	Power of the connected heating element too low	In case of power value of heating zone below 50 W (at 230V) no current measurable.
No current measured	Fuse defective	Check appropriate fuse for zone on power controller card and where necessary, exchange it.
No current measured	Wiring error	Check wiring
Sensor reversed polarity	Sensor with reversed polarity connected.	Check the pin assignment of connecting cable and of mold.
Sensor defective or no sensor connected	No sensor connected, sensor defective	Check the connected sensors ■ Remove connecting cable of hot runner controller ■ Measure resistance of sensor with multimeter Infinite resistance means, no sensor existing or sensor defective
Sensor defective or no sensor connected	Sensor wrong connected	Check the pin assignment of connecting cable and of mold.
Sensor permuted	The sensor or the heating of the zone was connected to the connection of zone XXX	Check other zones for occurrence of same fault and remove wiring faults in connecting cable and mold.
Check not completely executed!	Check not completely executed!	Repeat MoldCheck for these zones

14 MoldSnapshot



Call MoldSnapshot

Description 	MoldSnapshot (review protocol) is important for users who need proof of the function and thus on the state of a hot runner.
How it works	MoldSnapshot takes a snapshot of the state of the hot runner. Here are the most important process data like e.g. setpoint values, actual values, output values, heating currents and control parameters saved. These data are like a fingerprint of the hot runner. These are parameters which mirror the state of the hot runner. For example, incorrect sizing of heaters are instantly recognizable, similar zones can be based on their characteristics compared directly. If all the parameters in a user-acceptable range, it can be saved as a reference for the MoldSnapshot the hot runner. For a MoldSnapshot only makes sense when you can compare it with a reference snapshot. For hot runner controllers with **TEMPSoft2** operation any number of MoldSnapshots can be saved. For documentation these can be printed.
What good is it	MoldSnapshot is a very easy to use and evaluate resource for quality and condition of a hot runner. MoldSnapshot provides the user a clear picture of the hot runner and provides the ability to detect errors early and rapid and correct it.

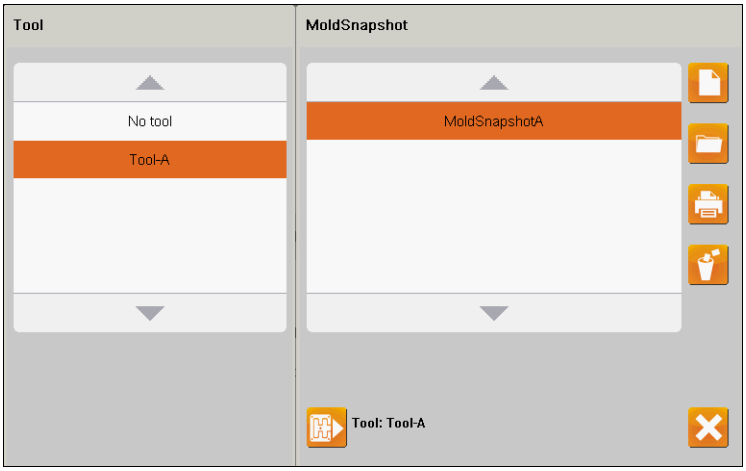
Change setting	The visible and therefore operable functions for the user are assigned by ↗User Administration.

14.1 Call MoldSnapshot

MoldSnapshot takes a snapshot of the state of the hot runner. Here are the most important process data like e.g. setpoint values, actual values, output values, heating currents and control parameters saved.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user prof is logged in.

Call MoldSnapshot — Press key



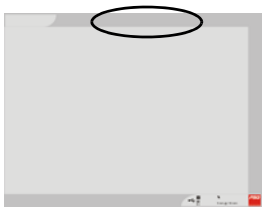
Select group

Select tool

Press key

Details and operation see chapter ↗MoldSnapshot

15 Group



Call group

Description 	To simplify the selection, zones can previously be combined into groups. At ↗Zone selection, a group can be referenced and the zones included are displayed as selected in the zone field.
How it works	Details see chapter ↗Zone selection
What good is it	Zones with the same characteristics e.g. concerning zone types or setting for parameters, are once defined and are available for all users of a tool, to achieve a quick an precise selection.

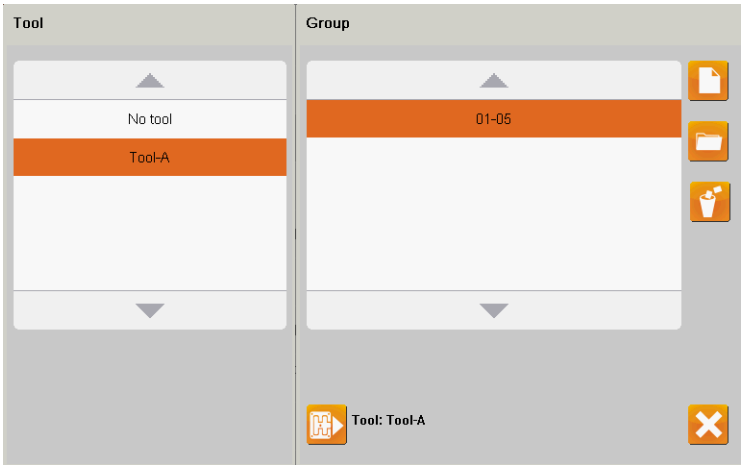
Change setting	The visible and therefore operable functions for the user are assigned by ↗User Administration.

15.1 Call group

To simplify the selection, zones can previously be combined into groups. At ↗Zone selection, a group can be referenced and the zones included are displayed as selected in
the zone field.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Call group — Press key



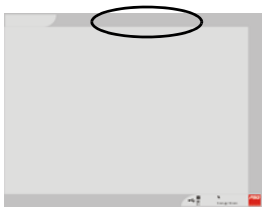
Select group

Select tool

Press key

Details and operation see tool management chapter ↗Group

16 Program



Call program

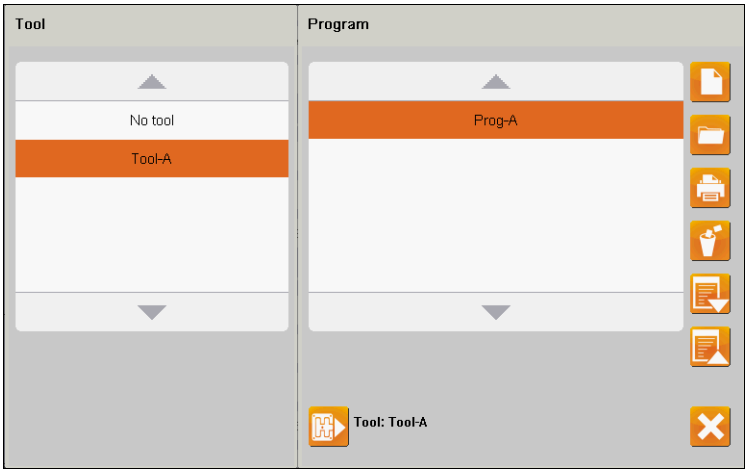
Description 	A program in **TEMPSoft2** means a data set with all parameters of all zones of a hot runner controller. The number of storable data sets is nearly unlimited.
What good is it	The programs support the customer at setting during often tool replacement and reduce the start-up phase.

Change setting	The visible and therefore operable functions for the user are assigned by ↗User Administration.

16.1 Call program

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Call program — Press key



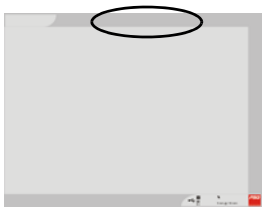
Select program

Select tool

Press key

Details and operation see tool management chapter ↗Program

17 View



Call view

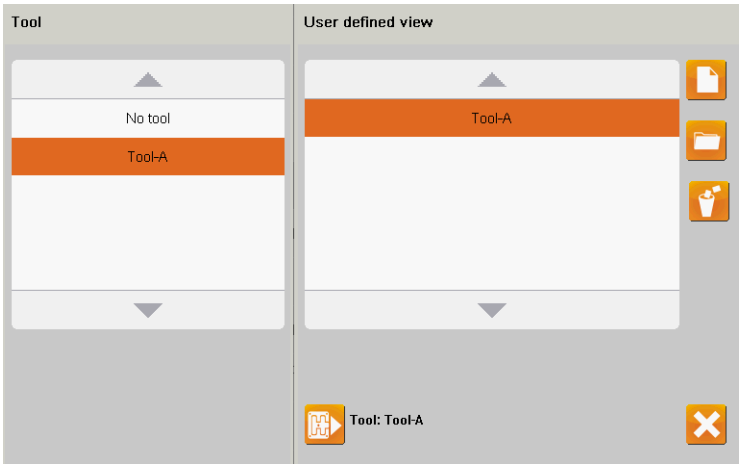
Description 	For simple handling with hot runner control systems, the user defined views are integrated **TEMPSoft2** .
How it works	The user defined views can quite easily be created or changed with the available functions in **TEMPSoft2**.
What good is it	A user defined view offers by a drawing area ■ Images ■ Texts ■ Zones ■ Difference bar charts ■ Parameters ■ Selection points/Links ■ Lines to combine in an easy way, and so to present the process in an appropriate form graphically.

Change setting	The visible and therefore operable functions for the user are assigned by ↗User Administration.

17.1 Call view

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Call view — Press key



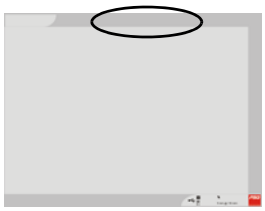
Select view

Select tool

Press key

Details and operation see tool management chapter ↗View

18 Setting



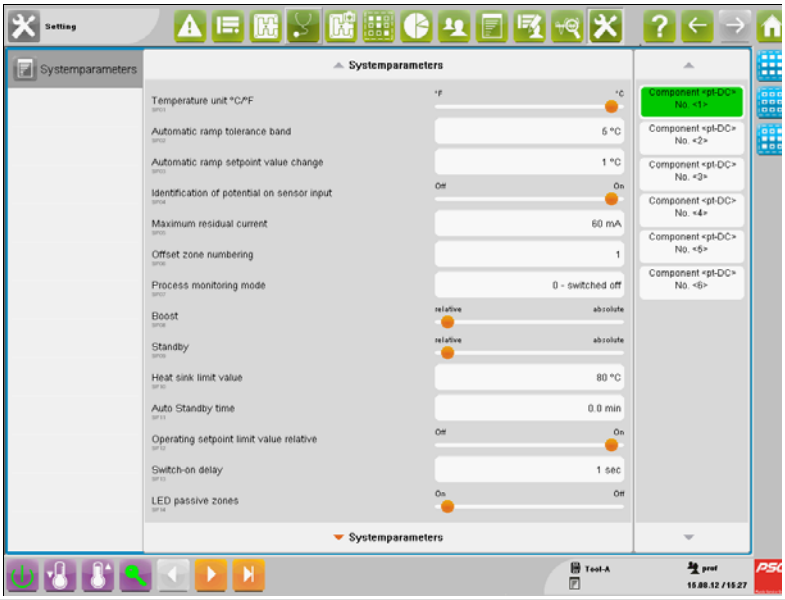
Call setting

Description 	Setting in **TEMPSoft2** means system relevant settings, like ■ Setting for language, data storage, supply voltage, etc. ■ System Parameters ■ Communication ■ Digital in-/outputs ■ Configuration ■ Viewer ■ Printer settings ■ MoldCheck result ■ Service portal That's why the setting (system parameters excluded) are only enabled for the user **admin** and should be set once at start-up of the system.
Change setting	The visible and therefore operable functions for the user are assigned by ↗User Administration.

18.1 Call setting

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Call setting — Press key



The logged in user **prof** is shown:

System Parameters

The system parameters can be entered for each component (green shaded).

Details and operation see chapter ↗Set parameters
Meaning of system parameters see document Hot Runner Controller Parameters.

19 Process Monitoring

Description	Unfortunately leakages in Hot Runner and hence resulting overmolding could not always be avoided. They could be caused by wear, incorrect operation, construction or production faults or by incorrect installation, leading at last to production breakdown and expensive repair. The function leakage detection in the hot runner controllers can identify an upcoming leakage at an early stage, quickly and reliably by intelligent analysis of the process parameters. It is possible that there will be false alarms and leaks can not be detected. This usually depends on structural conditions in the hot runner, as well as on a faulty operation.
How it works	The status of the zones in the hot runner is supervised by process monitoring with the help of characteristics, determined during the learning phase (operating point, tolerance band). Is the function process monitoring running in case of an error, i.e. the tolerance limit is exceeded, an alarm is output on display. At the best the alarm can be output on an output and be used for further analysis e.g. as „Stop Machine“.
What good is it	The process monitoring is an important module for operating reliability. With it, the state of the hot runner is preventively monitored for leaks, if properly applied, unnecessary downtime, due to cleaning of the hot runner of over injected plastic, is prevented.

Recommendation

The learning phase should start, when the machine is running, i.e. after production start of the injection molding machine. Note this please, when process monitoring mode is selected. Is the learning phase started at a different point of time, the learned operating points can be adapted by greater tolerance definitions.

Change setting

	profiTEMP	TEMP-Command
a	|pT[SP07] Process monitoring mode|	|TC[SP40] Process Monitoring Mode|
b	|pT[P025] Proc.(ess) monitoring tolerance|	|TC[P097] Tolerance of Process|
c	|pT[P026] Proc.(ess) monitoring operat.(ing) point|	|TC[P099] Process monitoring operating point|

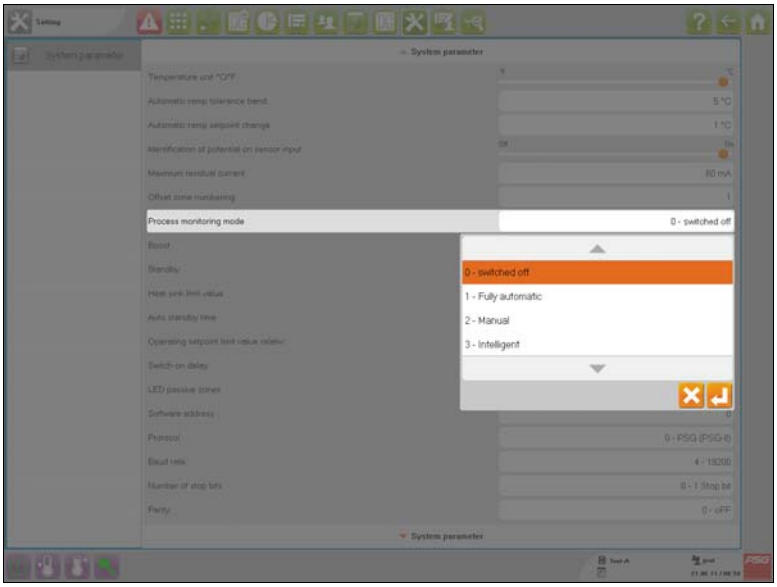
See parameter description of the corresponding hot runner controller

See chapter ↗Call setting - System parameters - Parameter (a)

See Chapter↗TEMPSoft2 Setting - Process monitoring ↗Show dialog box of process monitoring

See Chapter↗TEMPSoft2 Setting - Process monitoring ↗Cyclical check of the process monitoring

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Set process monitoring mode	Press key



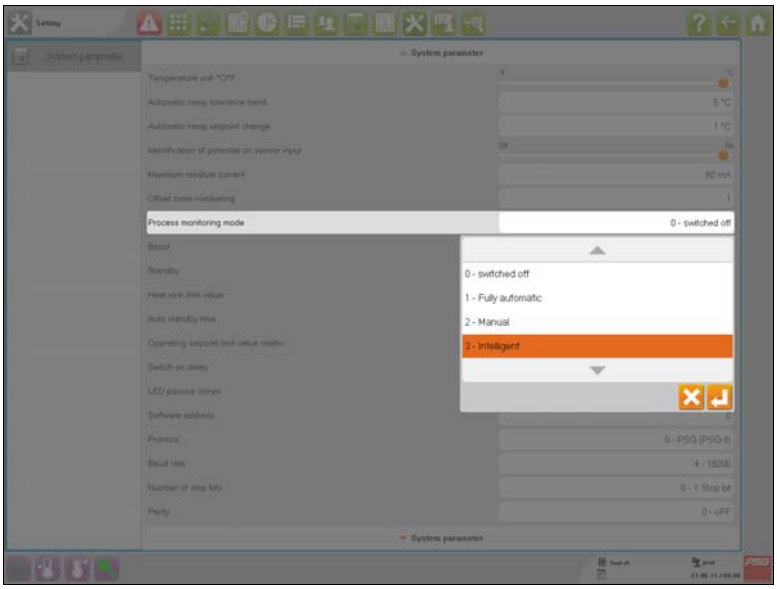
As default process monitoring is switched off. The further mode settings are:

- Fully automatic
- Manual
- Intelligent

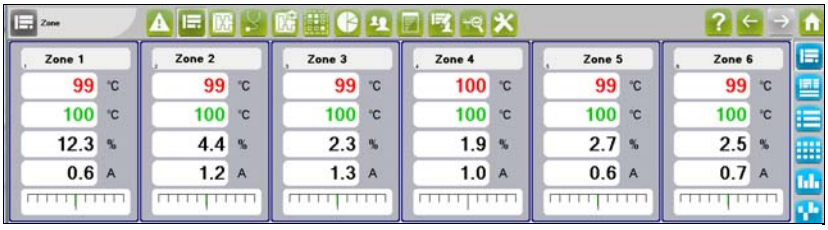
19.1 Process monitoring mode Intelligent

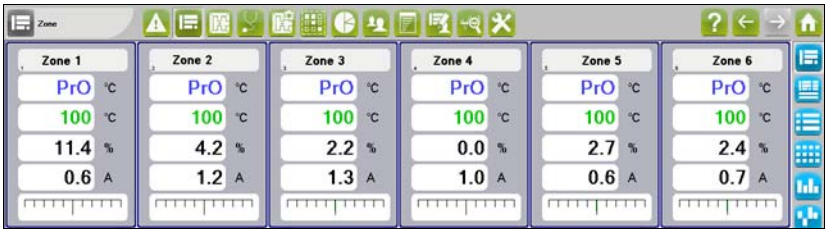
In the process monitoring mode **Intelligent**, the learning phase and the monitoring has to be started manually by the operator. After termination of the learning phase, the determined parameters (b), (c) are saved.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Set process monitoring mode	Press key



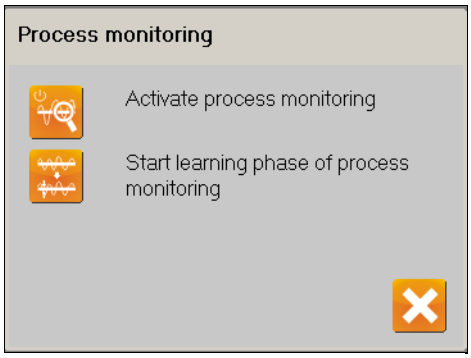
Set process monitoring mode to **Intelligent**





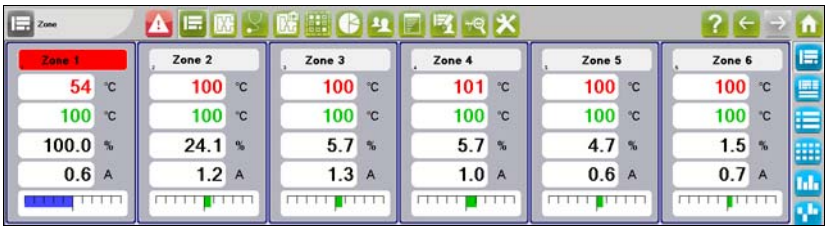
In the display field actual value of the zone, the actual value display alternates with the 3-digit information display (**blue**) **PrO** (process monitoring is not active).

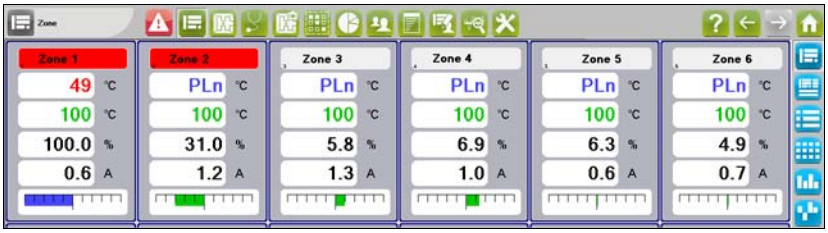
Start learning phase manually.



Press key (in header)

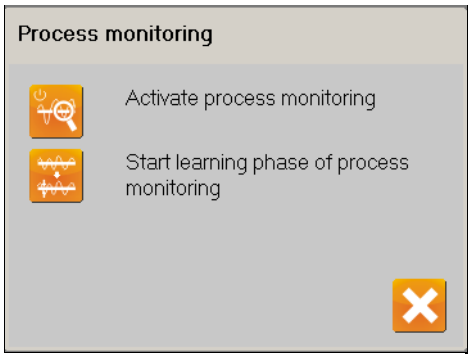
Press key





In the display field actual value of the zone, the actual value display alternates with the 3-digit information display (**blue**) **PLn** (process monitoring learning phase active).

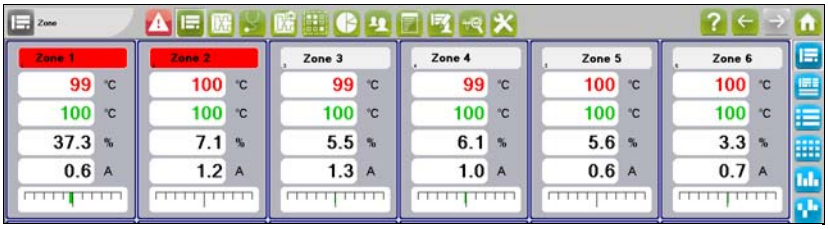
Start process monitoring manually.

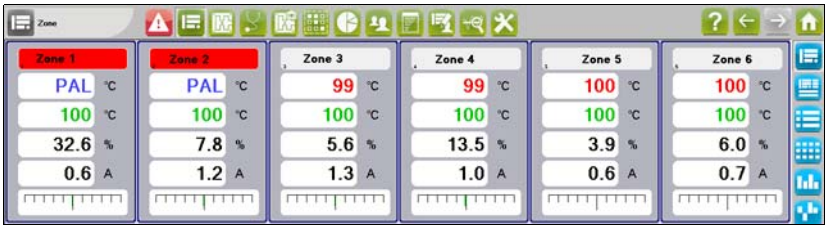


Press key (in header)

Press key

The process monitoring is started.





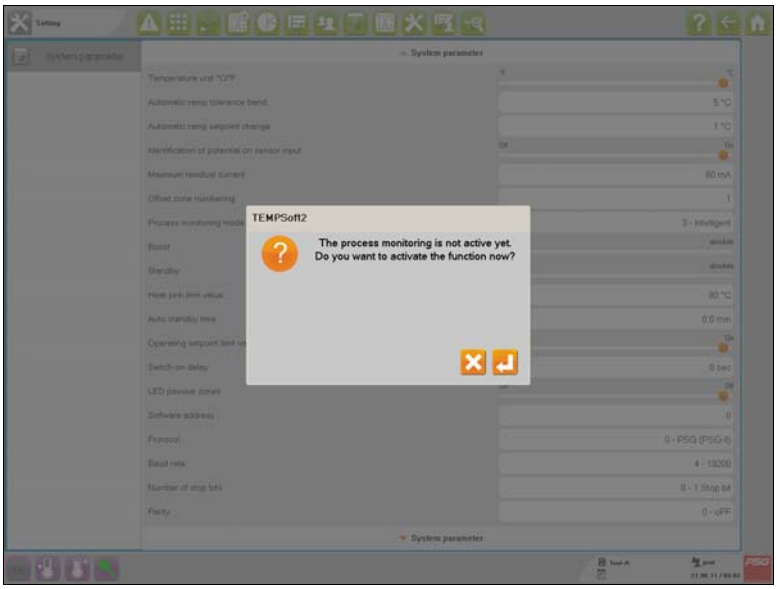
In the display field actual value of the zone, the actual value display alternates with the 3-digit information display (**blue**) **PAL**

(process alarm), when the tolerance limit is exceeded during activated monitoring.

The alarm can be output on an output and be used for further processing e.g. as „Stop Machine“.

The alarm message (see chapter ↗Alarms) can be acknowledged, as soon as the control characteristic returns to normal (error fixed), otherwise the alarm is activated immediately again.

Press key



When the monitoring is deactivated. the user is reminded, when see chapter ↗TEMPSoft2 Setting - Process monitoring ↗Show dialog box of process monitoring = ON.

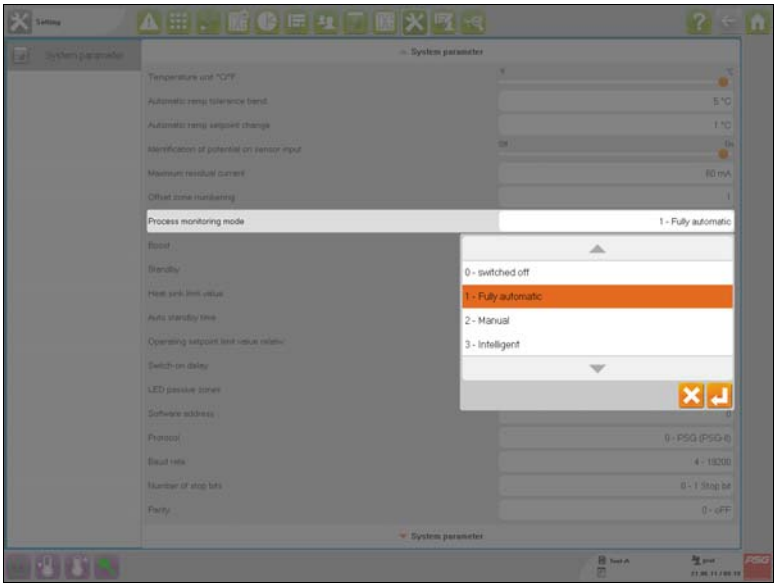
19.2 Process monitoring mode Fully automatic

In the process monitoring mode **Fully automatic**, the learning phase and the monitoring is automatically started by the system and the determined parameter (c) is saved..

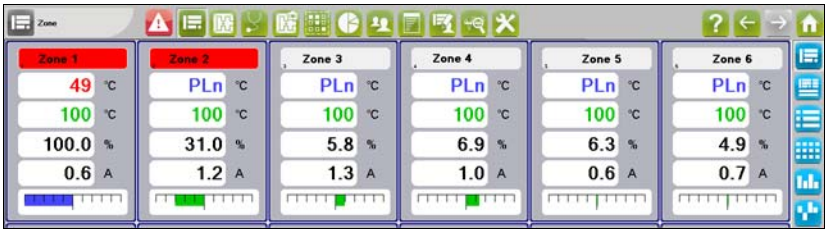
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Set process monitoring mode

Press key

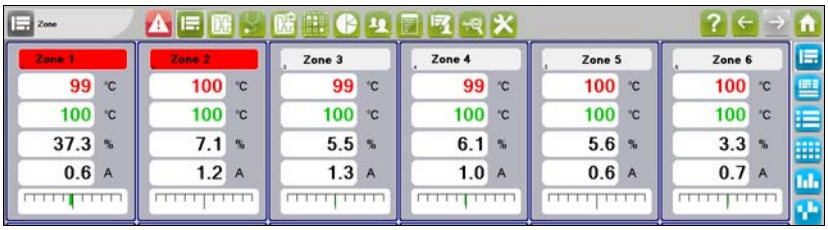


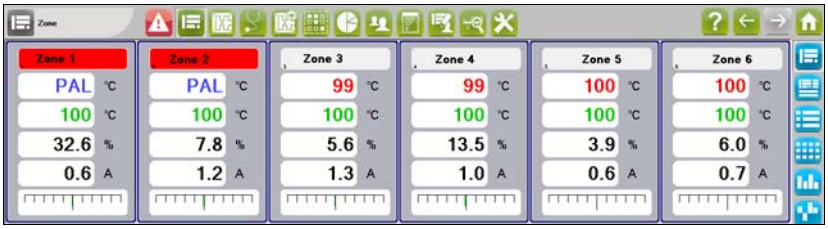
Set process monitoring mode to **Fully automatic**



In the display field actual value of the zone, the actual value display alternates with the 3-digit information display (**blue**) **PLn** (process monitoring learning phase active).

After termination of the learning phase the process monitoring is automatically started by the system.





In the display field actual value of the zone, the actual value display alternates with the 3-digit information display (**blue**) **PAL**

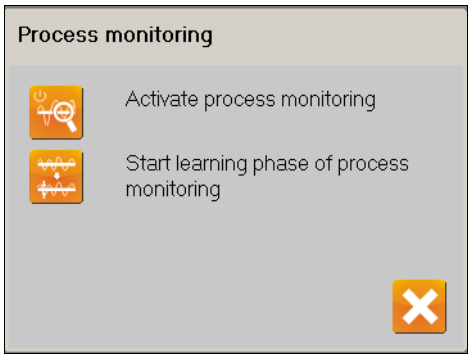
(process alarm), when the tolerance limit is exceeded during activated monitoring.

The alarm can be output on an output and be used for further processing e.g. as „Stop Machine“.

The alarm message (see chapter ↗Alarms) can be acknowledged, as soon as the control characteristic returns to normal (error fixed), otherwise the alarm is activated immediately again.

Press key

The learning phase can be manually started at any time in this mode.



Press key (in header)

Press key

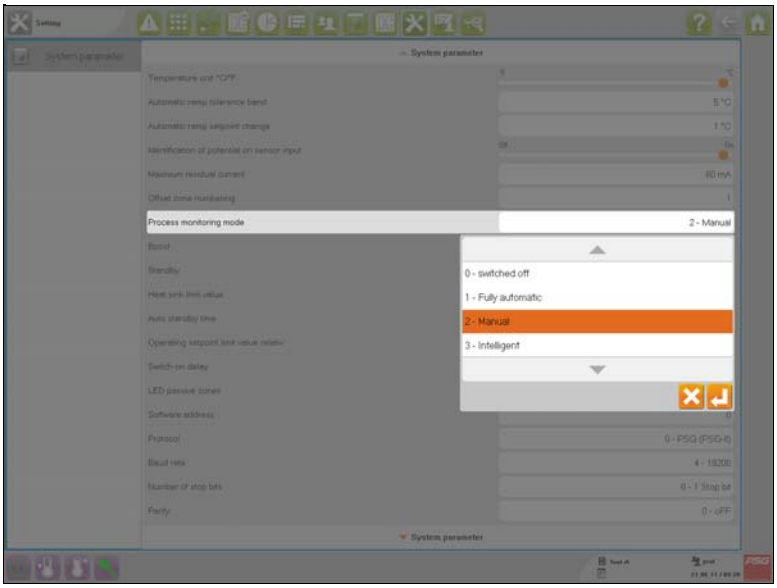
19.3 Process monitoring mode Manual

In the process monitoring mode **Manual**, the learning phase has to be started manually by the operator. After termination of the learning phase the process monitoring is automatically started by the system and the determined parameter (c) is saved..

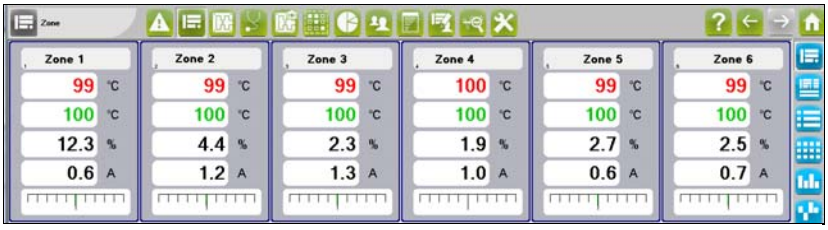
The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

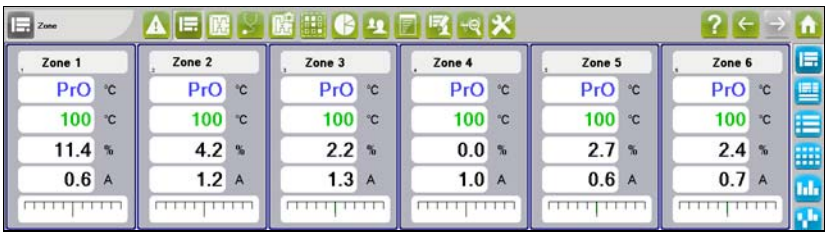
Set process monitoring mode

Press key



Set process monitoring mode to **Manual**



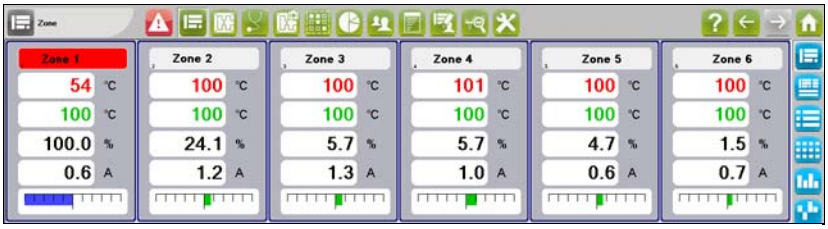


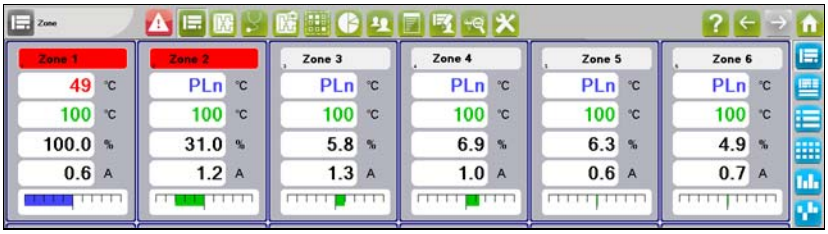
In the display field actual value of the zone, the actual value display alternates with the 3-digit information display (**blue**) **PrO** (process monitoring is not active).

Start learning phase manually.

Press key (in header)

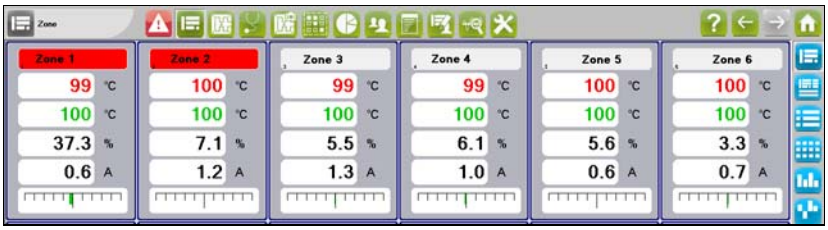
Press key

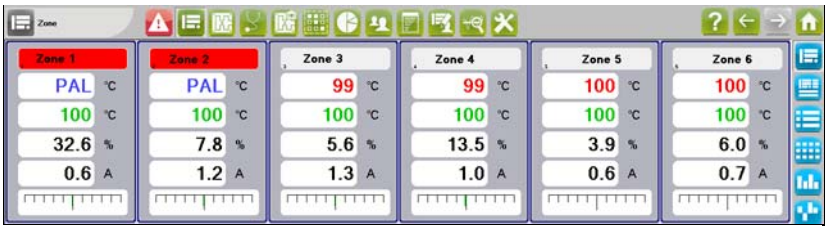




In the display field actual value of the zone, the actual value display alternates with the 3-digit information display (**blue**) **PLn** (process monitoring learning phase active).

After termination of the learning phase the process monitoring is automatically started by the system.





In the display field actual value of the zone, the actual value display alternates with the 3-digit information display (**blue**) **PAL**

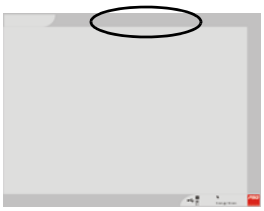
(process alarm), when the tolerance limit is exceeded during activated monitoring.

The alarm can be output on an output and be used for further processing e.g. as „Stop Machine“.

The alarm message (see chapter ↗Alarms) can be acknowledged, as soon as the control characteristic returns to normal (error fixed), otherwise the alarm is activated immediately again.

Press key

20 User Administration



Call user administration

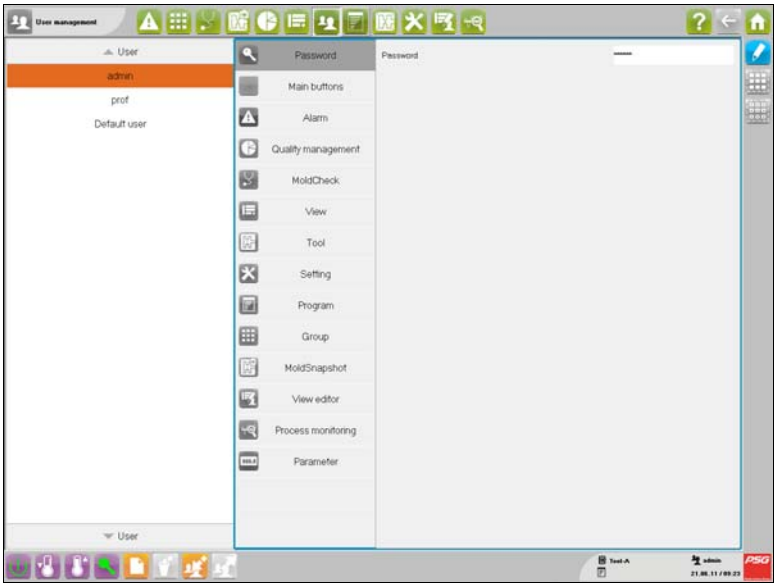
Description 	Absolute process security can be achieved by preventing unauthorized input on the device.
How it works	In a convenient user administration, a user can be created and authorization for entry on the display can be assigned in **TEMPSoft2**. In order to achieve full control of the inputs, because all logins and logouts, as well as inputs on the device are recorded. The user management allows the customization of the enabled functionality to the needs of each customer and can be made by himself.
What good is it	In times in which 100% quality parts must be provided, faulty insertions must be prevented. With the user management in **TEMPSoft2**, reliability in the production process is guaranteed.

Change setting	The visible and therefore operable functions for the user are assigned by ↗User Administration.

20.1 Call user administration

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **admin** is logged in.

Call user administration — Press key



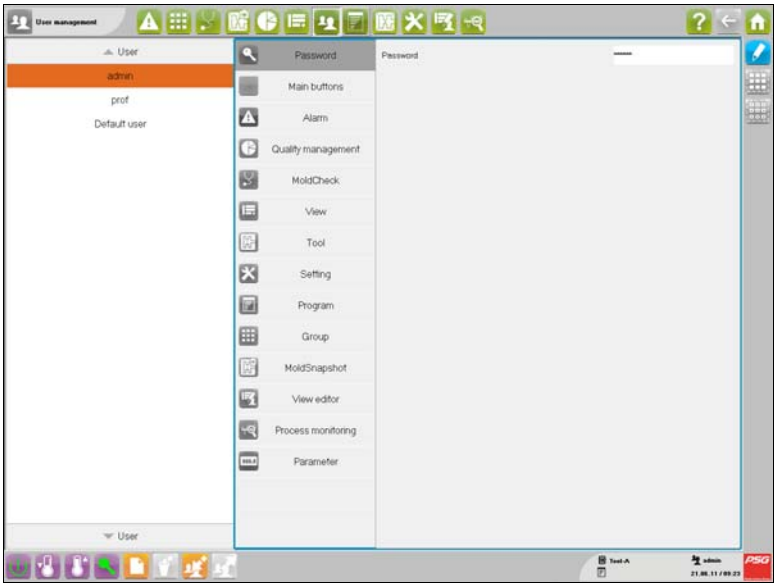
In the user administration the user admin/prof can

- ↗Create a new user
- ↗Change password
- ↗Delete user
- activate/deactivate access rights

Details and operation see chapter ↗Set parameters.
Meaning of system parameters see document Hot Runner Controller Parameters.

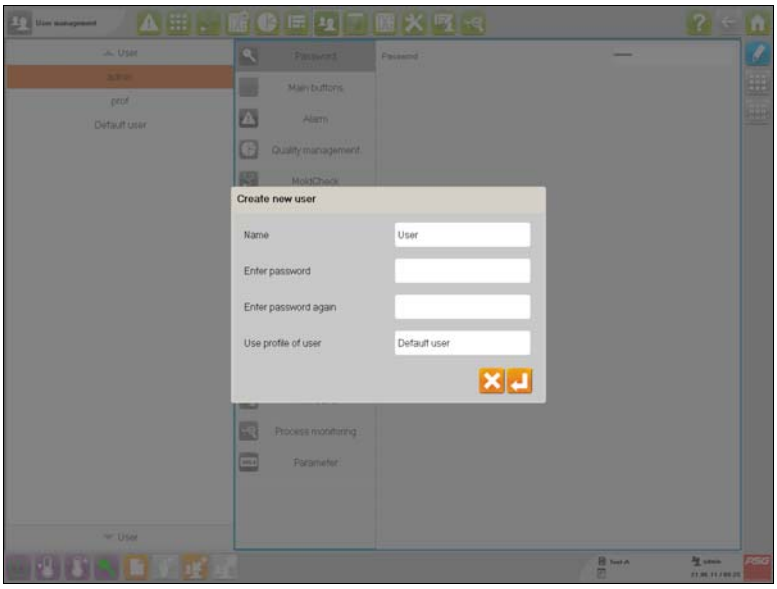
20.1.1Create a new user

At creation of a user, the name, the password and a profile has to be assigned.

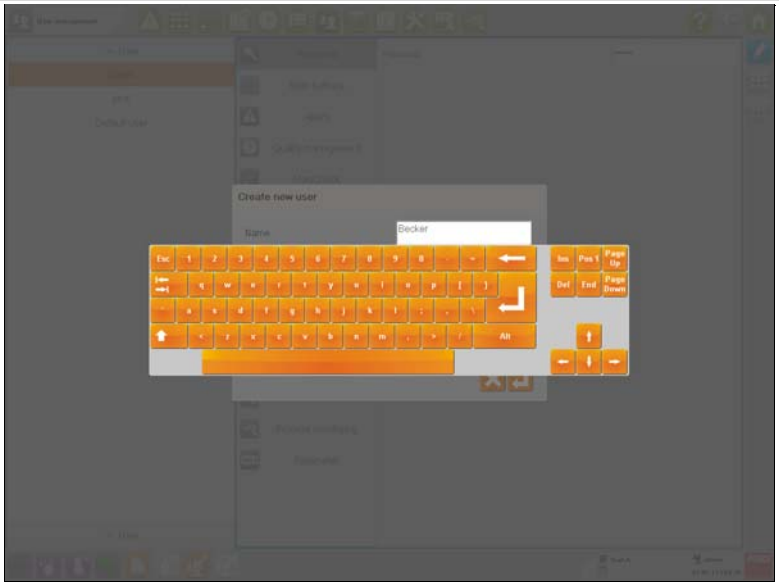


The user administration is displayed.

Press key

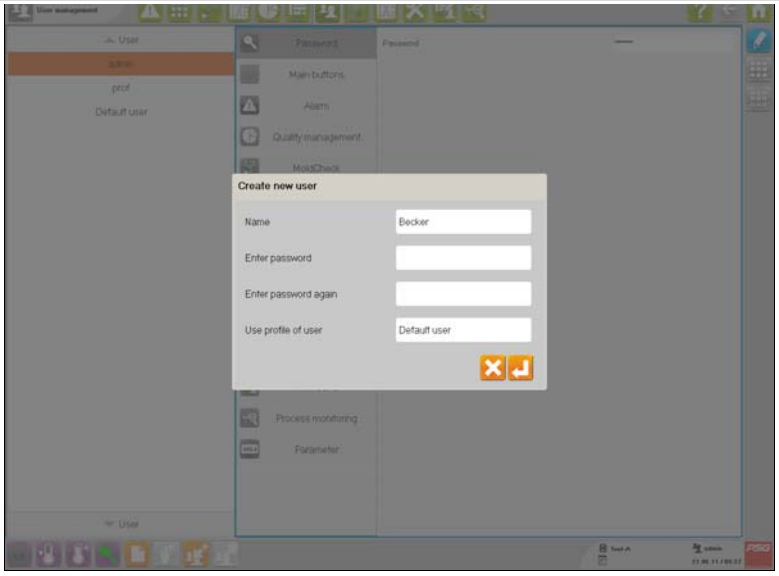


Select field NAME.

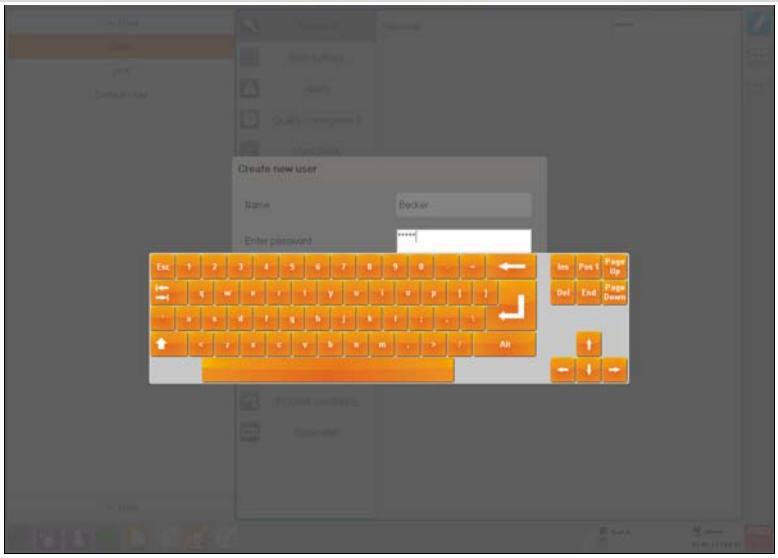


Enter the name using the visual keyboard

Confirm



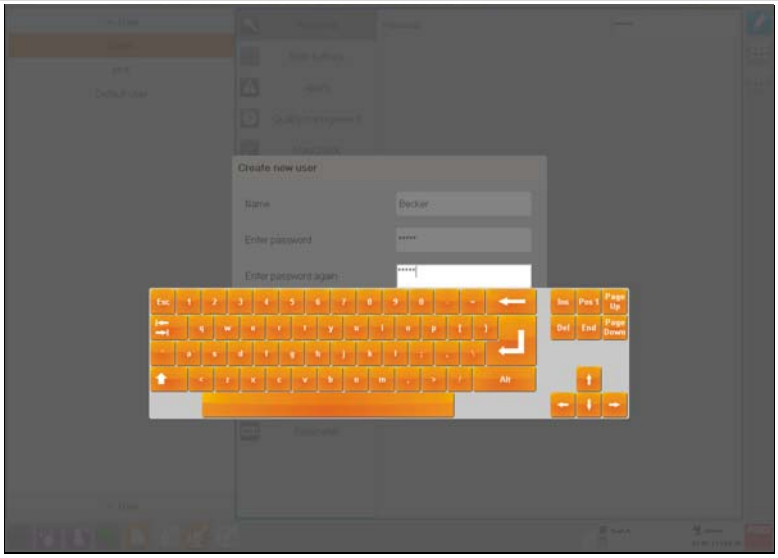
Select field ENTER PASSWORD.



Enter the password using the visual keyboard

Confirm

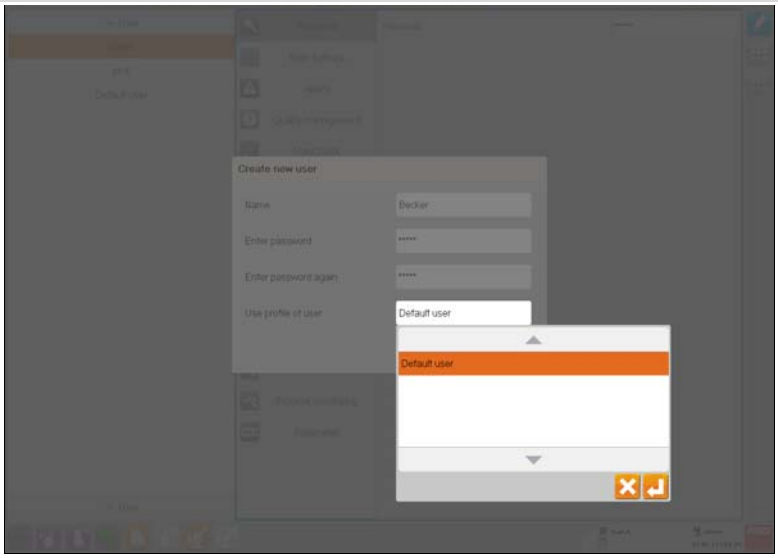
The password length must be at least 5 characters.



Select field ENTER PASSWORD AGAIN.

Enter the entered password again using the visual keyboard

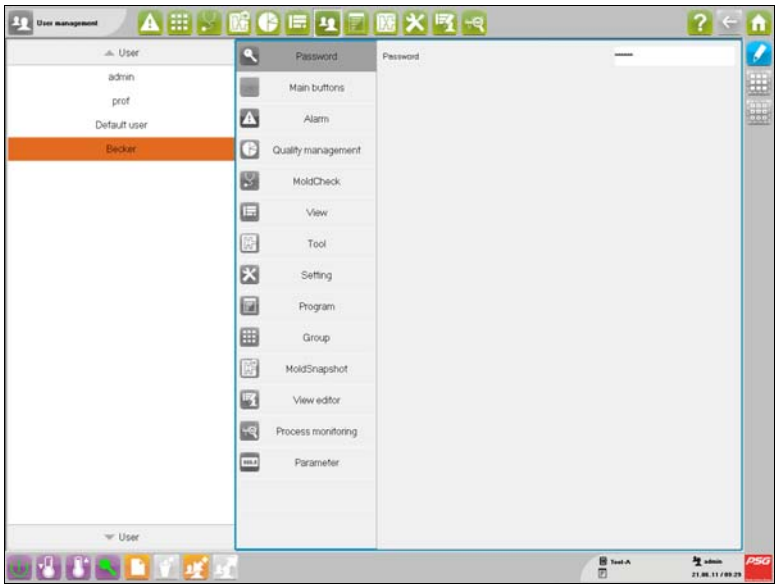
Confirm



Select field USE PROFILE OF USER

Confirm

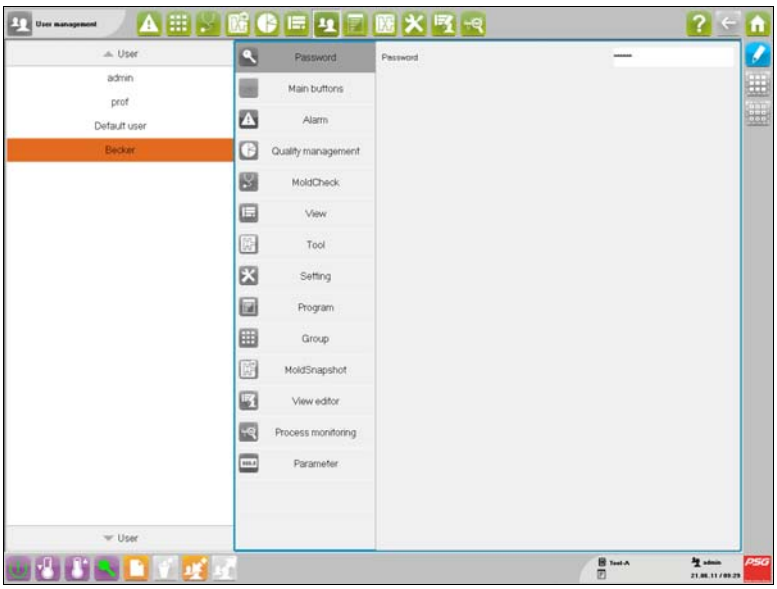
To ease the creation of a new user, an existing profile can be assigned. The profile of the newly created user can be individually customized.



A new user is created

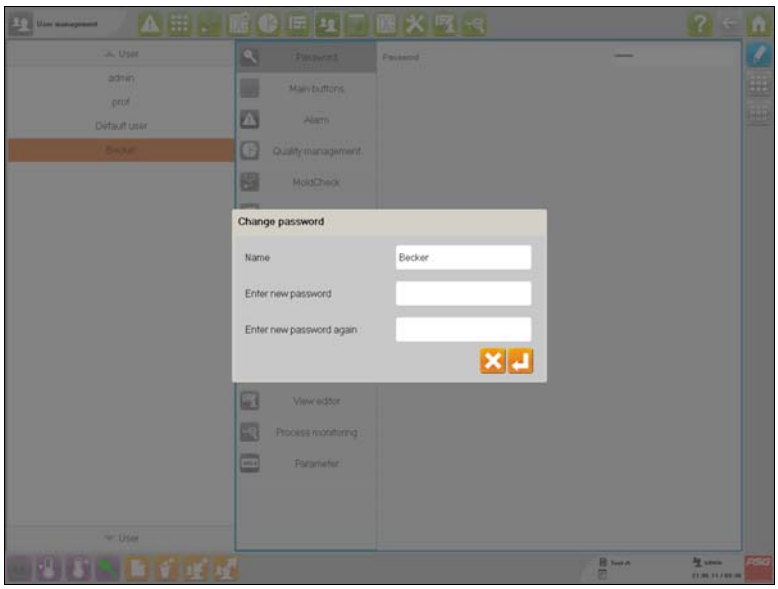
20.1.2Change password

For an existing user the password can be changed.



The user administration is displayed user Becker is selected.

Press key



Select field ENTER PASSWORD.

Enter the password using the visual keyboard

Confirm

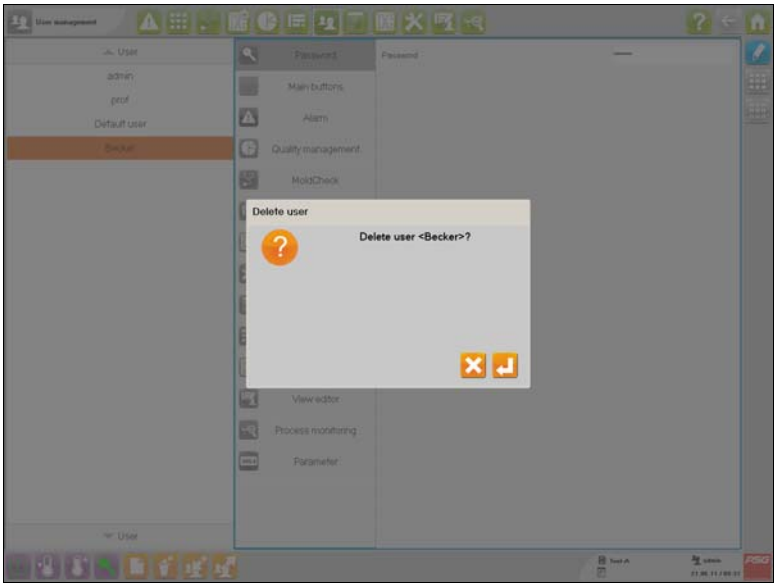
Select field ENTER PASSWORD AGAIN.

Enter the entered password again using the visual keyboard

Confirm

20.1.3Delete user

Delete the selected user.



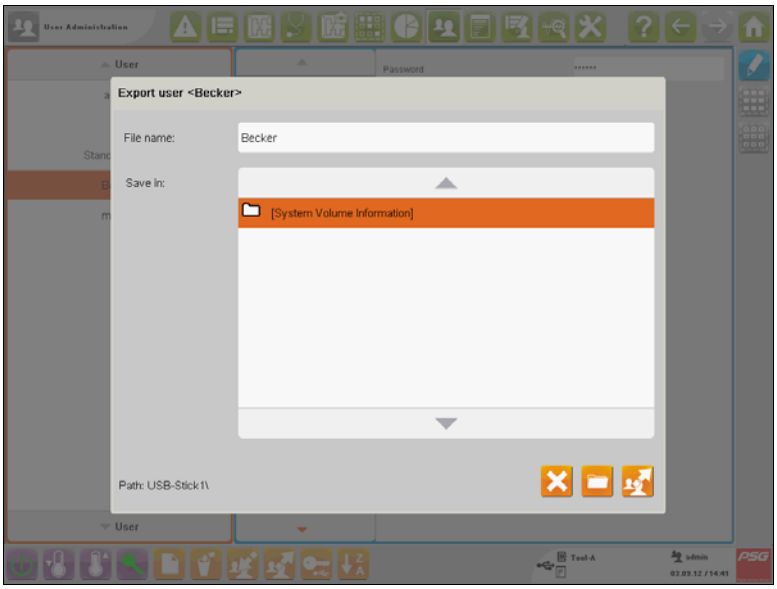
Select user

Press key

Confirm or reject

20.1.4Export user

The user and the specified settings are exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown and the function is canceled.	
	Select user on the left side, press key
Cancel function	Press key
The connected USB stick identifies itself by: Path: **USB stick** <number> \	
Select a directory on the USB stick	Press key
or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate export	Press key

Before export it is checked, whether there is already a file with the same name on the USB stick. The file can be overwritten and/or exported with another name.

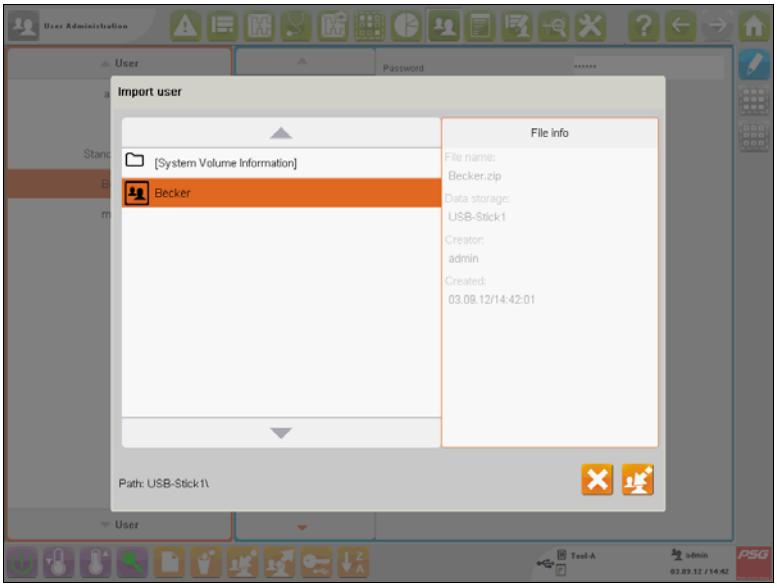
After completion of the dialogue, the status of the export is displayed.

20.1.5Import user

The user and the specified settings are imported from a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.

Is no USB stick connected, a message is shown and the function is canceled.



Press key

Was a different file name, than the standard specified note file info.

Cancel function

Press key

The connected USB stick identifies itself by:
Path: **USB stick** <number> \

Select a directory on the USB stick

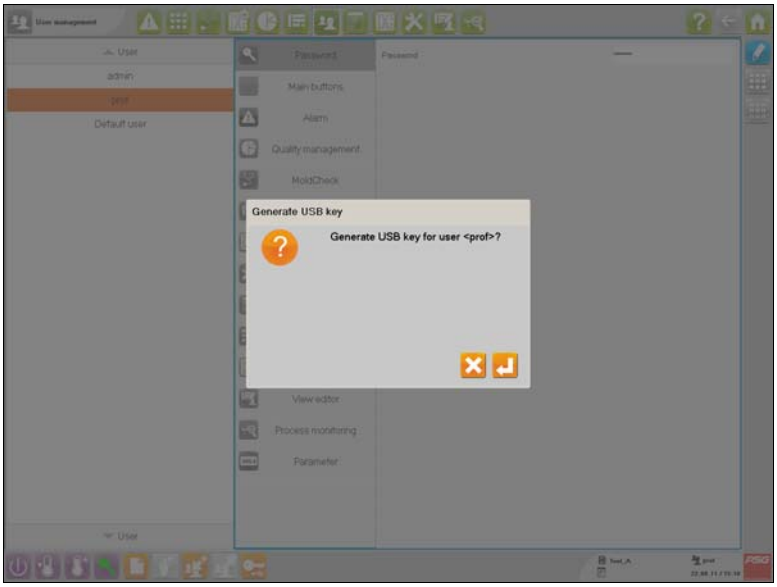
Press key

or a directory on the USB stick by double click on	
Return to previous directory by double click on	
Activate import after selection of file	Press key
Before import it is checked, whether there is already a file with the same name in **TEMPSoft2**. The file can be overwritten and/or imported with another name. The file can be overwritten and/or imported with another name.	
After completion of the dialogue, the status of the import is displayed.	

20.1.6Generate USB key

For each user (except Default) a password is existing. This key can be exported on a connected USB stick.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **prof** is logged in.	
Is no USB stick connected, a message is shown and the function is canceled.	
	Press key



Confirm or reject

A hidden file is exported on a connected USB stick. Only one file is permissible per USB stick. The lastly exported key can be used for login.

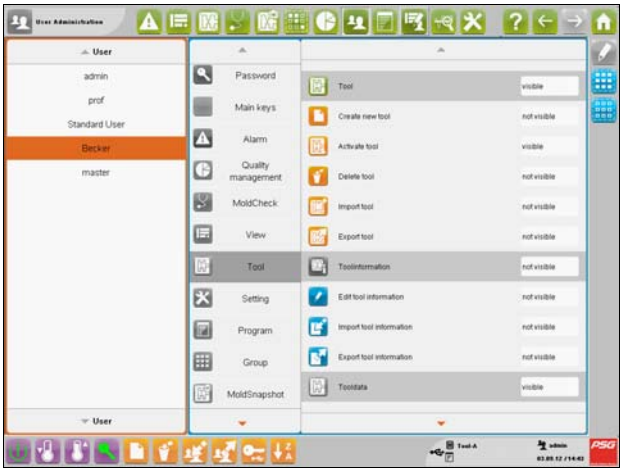
Confirm or reject

After rejection the normal login dialog appears (see chapter ↗Login).

20.1.7Activating / Deactivating of access rights

In the user administration access rights are

- activated, by making keys VISIBLE. Are the keys visible, the functions behind the keys are operable
- deactivated, by making keys NOT VISIBLE. Are the keys not visible, the functions behind the keys are not operable.



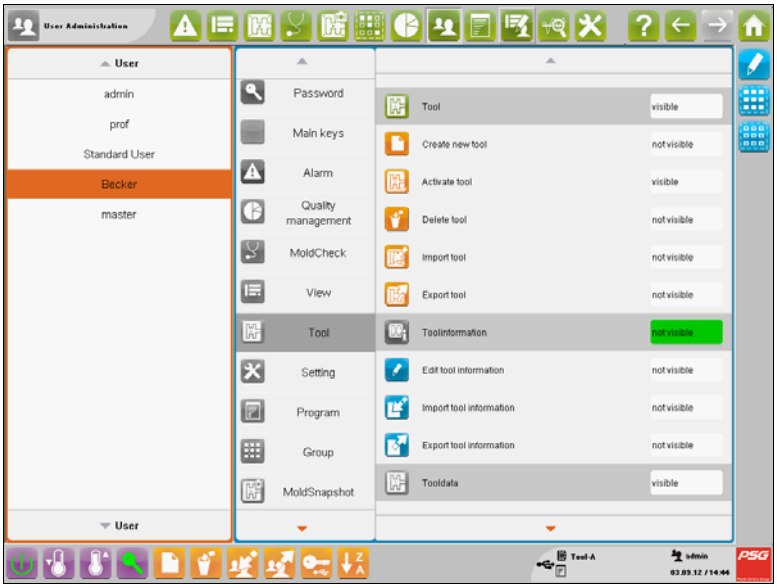
The user administration is displayed user Becker is selected.

Select tool.

All keys/functions can be activated/deactivated in the user administration.

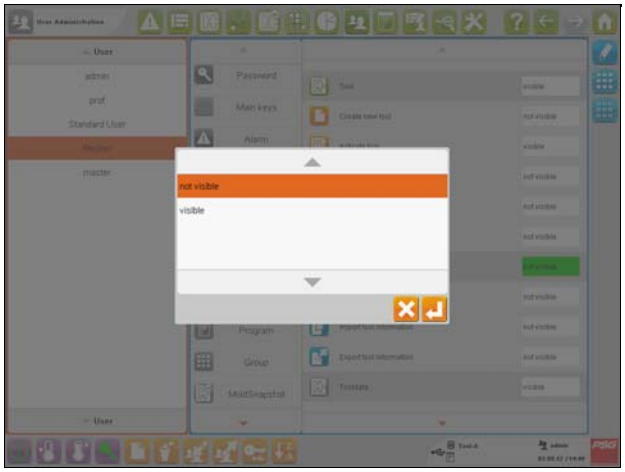
The keys are shown in the color, they also have in the function. That eases the identification, which key symbols are visible/not visible.

The **GRAY** keys represent sub-functions. E.g. in the ↗Tool management sub-function ↗Tool data.



Select field for key tool data

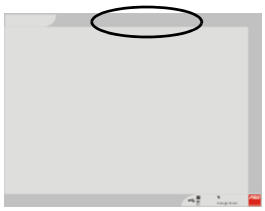
Press key



Set visible/not visible for key

Confirm or reject

21 Setting - admin



Call setting

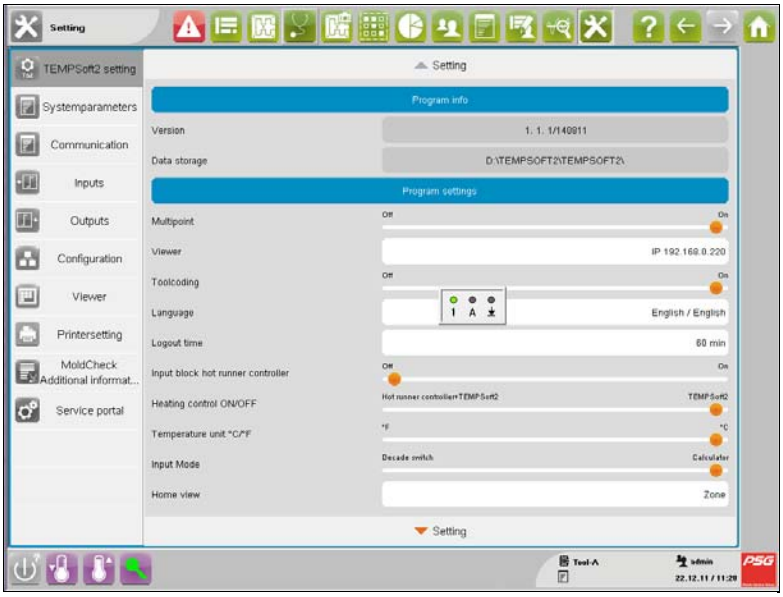
Description 	Setting in **TEMPSoft2** means system relevant settings, like ■ Setting for language, data storage, supply voltage, etc. ■ System parameters ■ Communication ■ Digital in-/outputs ■ Configuration ■ Viewer ■ Printer settings ■ MoldCheck result ■ Service portal That's why the setting (system parameters excluded) are only enabled for the user **admin** and should be set once at start-up of the system.
Change setting	The visible and therefore operable functions for the user are assigned by ↗User Administration.

21.1 Call setting admin

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **admin** is logged in.

Call setting

Press key



The logged in user **admin** is shown:

- TEMPSoft2 Setting for language, data storage, supply voltage, etc.
- System parameters
- Communication
- Digital in-/outputs
- Configuration
- Viewer
- Printer settings
- MoldCheck additional information
- Service portal

Details and operation see chapter ↗Set parameters.
Meaning of system parameters see document Hot Runner Controller Parameters.

The ex-works basic setting of a parameter is identified through a bracket (e.g. **[**on**]**).

21.1.1TEMPSoft2 Setting - Program info

Version	**Standard definition**
	<not changeable>
	Meaning
	Version number of **TEMPSoft2**

Data storage	**Standard definition**
	<not changeable>
	Meaning
	The application data, like e.g. images, groups, programs, etc. (see chapter ↗Data storage for TEMPSoft2 application data) are stored here.

21.1.2TEMPSoft2 Setting - Program settings

Multipoint	**Standard definition**
	[off], on
	Meaning
	Central operation and monitoring of several hot runner controllers. The individual hot runner controllers are connected over Ethernet to a PC for operating.

Viewer (see ↗Viewer)	**Standard definition**
	1. [All] 2. <user defined>
	Meaning
	1. All in **TEMPSoft2** configured components are shown with all zones independent from an assignment to a view. 2. Only the assigned components in the selected view are shown with their zones.

Tool Coding	**Standard definition**
	[off], on
	Meaning
	The tool coding specified in the tool management in tool data is evaluated by **TEMPSoft2**, when setting here ON (see chapter ↗Specify tool data).

Language	**Standard definition**
	[GERMAN], ENGLISH
	Meaning
	The available languages for the operator interface in **TEMPSoft2** are offered in a list of value for selection. The selected language is taken over in the user interface immediately after confirmation of the language selection.

Logout time	**Standard definition**
	10 min
	Meaning
	If there is no operation in the system, for the time set here, the logged in user (see chapter ↗Login/Logout) is logged out.

Input block hot runner controller	**Standard definition**
	[on], off
	Meaning
	Is the hot runner controller equipped with a Display Unit pT-DU, the keys on the pT-DU can be entry locked, when setting here ON.

Heating control ON/ OFF	**Standard definition**
	Hot runner controller+TEMPSoft2, [TEMPSoft2]
	Meaning
	The heatings/heaters can be switched on by **TEMPSoft2** and/or by a hot runner controller with Display Unit pT-DU (see chapter ↗Input block hot runner controller). At start of **TEMPSoft2** the settings heating ON/OFF are taken ■ at Hot runner controller+**TEMPSoft2** from hot runner controller in **TEMPSoft2** ■ at **TEMPSoft2** from **TEMPSoft2** in the hot runner controller übernommen.

Temperature unit °C/ °F	**Standard definition**
	[°C], °F
	Meaning
	All in the system implemented temperature values are changed from °C to °F and reverse due to the setting of temperature unit in **TEMPSoft2** The setting of the temperature unit °C / °F on system parameter level causes a change in the hot runner controller.

Input Mode	**Standard definition**
	Decade switch, [Calculator]
	Meaning
	There are two different input modes available to change parameters (see chapter ↗Set parameters)

Home view	**Standard definition**
	Alarm, Alarm detail, Setting, Tool, MoldCheck, Quality management, User defined views, Detail, [Zone], All, Difference bar, Bar, Program, MoldSnapshot, Groups
	Meaning
	All in the system available view are shown in the list of value for selection. Is the Home key pressed, the here specified view is shown (see chapter ↗Main view keys).

Direct entry	**Standard definition**
	off, [on]
	Meaning
	Witch this setting, an input box is directly opened at zone selection, to change the selected parameter.

TEMPSoft2 runs on a slow machine	**Standard definition**
	On, Off - Determined by **TEMPSoft2** and set optimal.
	Meaning
	The CPU load is determined at start of **TEMPSoft2**. The result is analyzed and is used to set the parameter.

Always show program	**Standard definition**
	off, [on]
	Meaning
	On: The last loaded program is displayed. Is the content of the program changed, the program is marked with * in the display of the current setting. Off: The last loaded program is displayed. Is the content of the program changed, the program is deleted in the display of the current setting.

Touch operation	**Standard definition**
	off, [on]
	Meaning
	On: Text for keys is displayed. Off: Text for keys is not displayed. See ↗Show text for keys

Query for MoldCheck start

Standard definition

[off], on

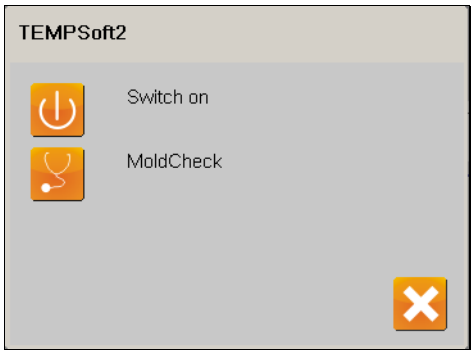
Meaning

On: A dialog box is shown.
Off: Dialog box is not shown.

A dialog box is shown

- after switch-on of the hot runner controller
- after activation of the heating by key

that offers the following selection:



	The heating is switched on. Process see chapter ↗Heating
	MoldCheck is started. Process see chapter ↗MoldCheck
	Cancel (Close dialog, see note)
	Note **Function only for profiTEMP** The function is compatible and combinable with |pT[SP13] Switch-on delay|. For |pT[SP13] Switch-on delay| > 0 and |pT[SP17] Query for MoldCheck start| = ON the Heating is started after switch-on delay expired.

21.1.3TEMPSoft2 setting - TEMPSoft2-Logger

TEMPSoft2 runs on	**Standard definition**
	external PC, [own PC]
	Meaning
	Generally the operating software **TEMPSoft2** and **TEMPSoft2**-Logger (com-munication to hot runner controller) run on the same hardware. If this is not the case, the setting is changed here.

Connect TEMPSoft2 Logger via	**Standard definition**
	[ServerIP], Server name
	Meaning
	Only relevant, when ↗TEMPSoft2 runs on = external PC The connection between operation software **TEMPSoft2** and **TEMPSoft2**-Logger is build by the entered Server IP or the entered Server name.

Server-IP	**Standard definition**
	127.0.0.1
	Meaning
	Only relevant, when ↗TEMPSoft2 runs on = external PC Specify the IP address of the communication server PSGCommServer here. Are **TEMPSoft2** and communication server PSGCommServer running on the same hardware (generally TEMP-Touch), the IP address localhost has to be specified here.

Server name	**Standard definition**
	<empty>
	Meaning
	Only relevant, when ↗TEMPSoft2 runs on = external PC Should the operation software **TEMPSoft2** and **TEMPSoft2**-Logger be connected by server name, the name has to be specified here. Can the server name not be determined, the connection is tried to be established by the specified server IP.

Server-Port	**Standard definition**
	4569
	Meaning
	The necessary port for Ethernet is here specified.

21.1.4TEMPSoft2 Setting - Views

Zone Selection	**Standard definition**
	[Numbering], Text
	Meaning
	Are zone names specified in the tool management, instead of the zone numbering, the zone names can be shown (see chapter ↗Zone names).

Scaling difference bar	**Standard definition**
	[+/-5] °C (unit dependent on setting of temperature unit °C/°F)
	Meaning
	The scaling of the y-axis for difference bar charts is specified here (see chapter ↗Difference bar chart view).

Show decimal place for temperature values	**Standard definition**
	[off], on
	Meaning
	Show the temperature display with and/or without decimal place.

Passive zones present dimmed	**Standard definition**
	off, [on]
	Meaning
	The display of the passive zones is dimmed.

21.1.5TEMPSoft2 Setting - MoldCheck

Voltage	**Standard definition**
	230 V
	Meaning
	The setting here is used for power calculation in MoldCheck and must equal with the settings for hot runner controller.

21.1.6TEMPSoft2 Setting - Process monitoring

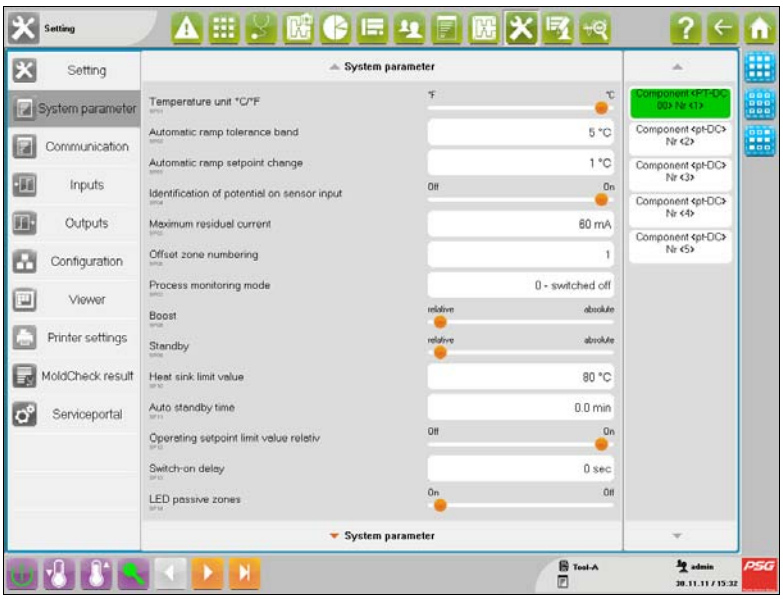
Show dialog box of process monitoring	**Standard definition**
	[off], on
	Meaning
	A dialog box with a message is shown to the user as reminder (see ↗Cyclical check of the process monitoring).

Cyclical check of the process monitoring	**Standard definition**
	2 min
	Meaning
	After the here specified time is elapsed, it is checked, whether the process monitoring is not activated, although all prerequisites for process monitoring are given (see chapter ↗Process Monitoring). A dialog box with a message can be shown to the user (see ↗Show dialog box of process monitoring).

21.1.7System parameters

See chapter ↗Call setting admin.

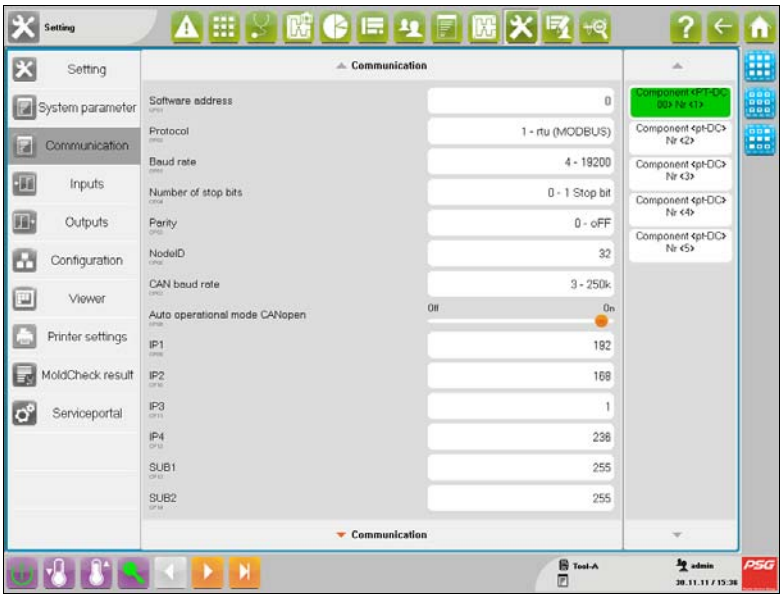
The system parameters can be entered for each component (green shaded).



21.1.8Communication

See chapter ↗Call setting admin.

The communication parameters can be entered for each component (green shaded).



21.1.9Inputs

Details and operation see chapter ↗Set parameters.

Meaning of inputs see document Hot Runner Controller Parameters.

21.1.10Outputs

Details and operation see chapter ↗Set parameters.

Meaning of outputs see document Hot Runner Controller Parameters.

Technical changes reserved

21.1.11Configuration

Characteristics and interfaces are specified in the configuration for the hot runner controllers, to communicate with the components (PC - hot runner controller). In the overview the most important characteristics and the current status of the components are shown. Dependent on the interface, the data entry is different. profiTEMP or TEMP-Command components can be specified. After a first selection, only components of the same hot runner controller type are offered.

Address	**Standard definition**	
	SER	0
	CAN	32
	IP	192.168.0.220
	Meaning	
	Address of component pT-DC.	

Interface	**Standard definition**	
	SER	
	CAN	
	[IP]	
	Meaning	
	Serial COM | CAN | Ethernet	

Port	**Standard definition**	
	SER	SER0-9
	CAN	CAN0-9
	IP	n.a.
	Meaning	
	Specification, which port is used.	

Protocol	**Standard definition**	
	SER	PSG, rtu, HRS
	CAN	n.a.
	IP	n.a.
	Meaning	
	Used protocol for the communication with hot runner controller over interface.	

Baud Rate	**Standard definition**	
	SER	1200, 2400, 4800, 9600, 19200
	CAN	78k, 100k, 125k, 250k, 500k, 800k 1M
	IP	n.a.
	Meaning	
	Transfer rate of the interface.	

Number of Stop Bits	**Standard definition**	
	SER	[1 Stop bit], 2 Stop bits
	CAN	n.a.
	IP	n.a.
	Meaning	
	Number of stop bits at communication by serial interface.	

Parity	**Standard definition**	
	SER	[off], Even, Odd
	CAN	n.a.
	IP	n.a.
	Meaning	
	Parity bit at communication by serial interface.	

Zone offset	**Standard definition**	
	SER	[0]...255
	CAN	[0]...255
	IP	[0]...255
	Meaning	
	Specify offset for zones.	

Number of zones	**Standard definition**	
	SER	[6]...250
	CAN	[6]...250
	IP	[6]...250
	Meaning	
	Number of zones of components.	

Tool Coding	**Standard definition**	
	[off], on	
	Meaning	
	The tool coding specified in the tool management in tool data is activated for the hot runner controller, when setting here ON (see chapter ↗Specify tool data). The tool coding must only be active for ONE component simultaneously.	

Are the components assigned to views, this is here specified for the single components.

21.1.12Viewer

The created components in the overview, can be combined by marking with a cross in the viewer and be stored by name.

By change see chapter ↗TEMPSoft2 Setting - Program info - Viewer, a selective view of the connected components is shown, e.g. structured by plants.

Existing views can be shown in a list of all available views by a click on the current view (upper left corner)

For later renamed views, there is a note, that entries in the logger with the old view names are no longer visible.

If the function ↗Multipoint is enabled, the IP (Standard setting) is displayed for the connected hot runner controllers, and a selection of hot runner controller can be done, for which the data should be displayed.

21.1.13Printer settings

For the printer the setting can be specified

- Printer: No printer | <physical printer>
- Paper format: A4 | Letter
- Border top / left / bottom / right: in mm
- Print logo; a .JPG-file on USB stick can be imported and used as Logo in a print-out.

Is NO printer selected, the printout is redirected into a PDF file, that is stored on a USB stick. Is a <physical printer> selected, the printout is directed to the printer.

21.1.14MoldCheck additional information

The user **admin** can assign fields with Additional Information for the printed MoldCheck results, which are shown to the user at storing of the MoldCheck results and must be filled in.

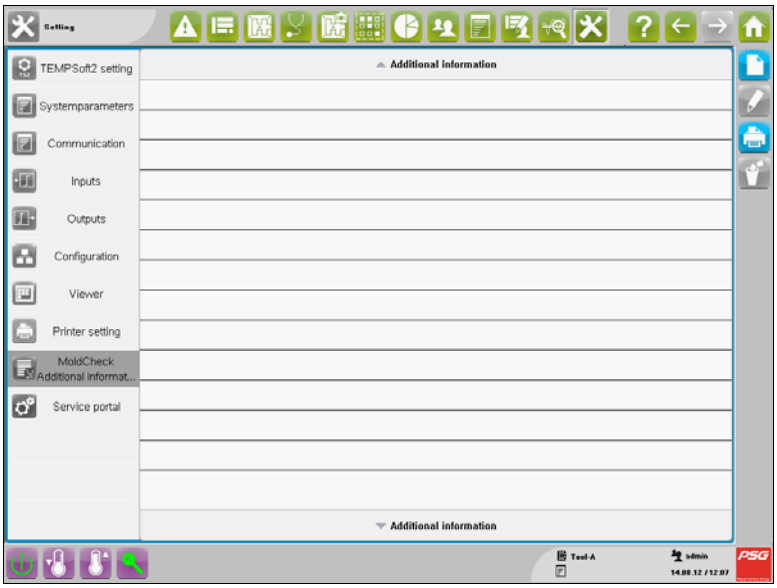
100 additional information can be created.

The visible and therefore operable keys for the user are assigned by ↗User Administration. The user **admin** is logged in.

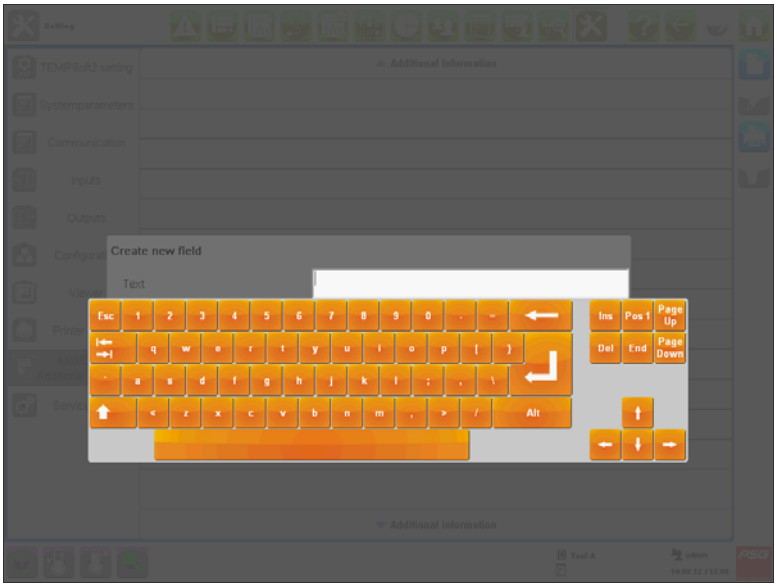
Call setting

Press key

Select MoldCheck result

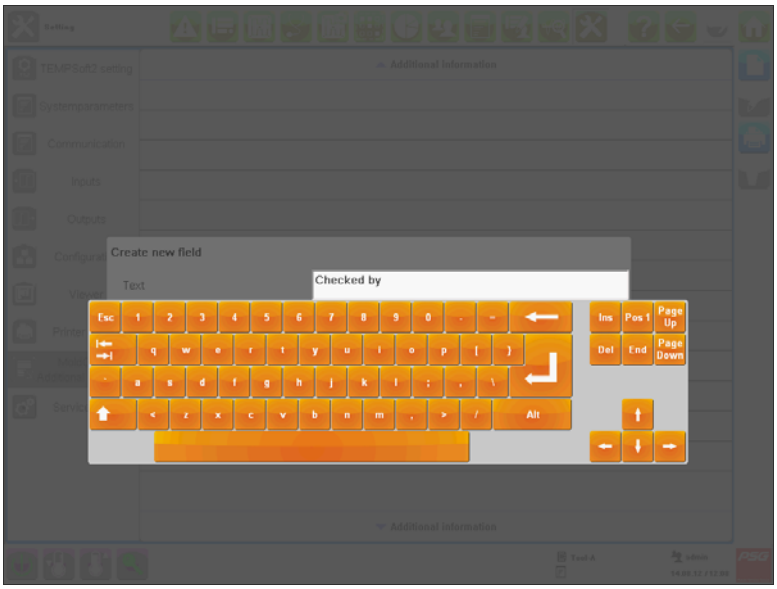


Press key

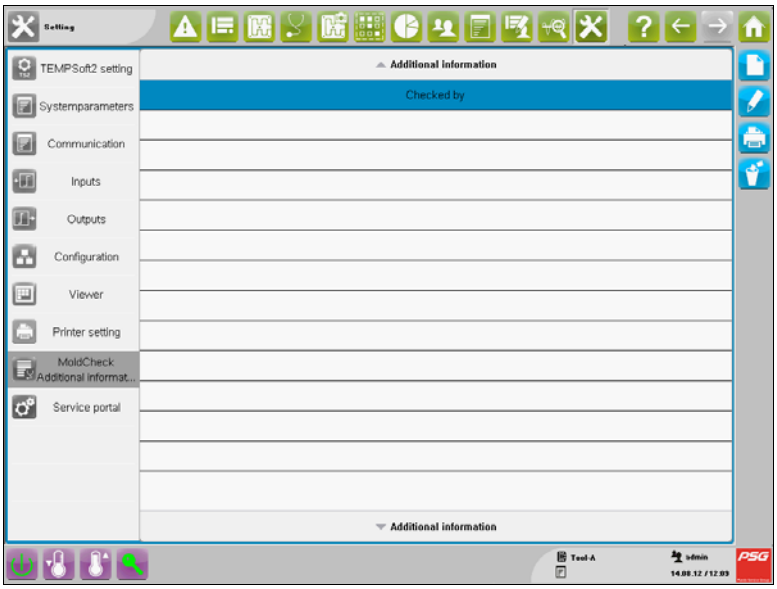


Select field TEXT.

Enter a text using the visual keyboard.



Confirm



Additional information is created.

The additional information is displayed, when the MoldCheck result is saved (see chapter ↗Save MoldCheck result).

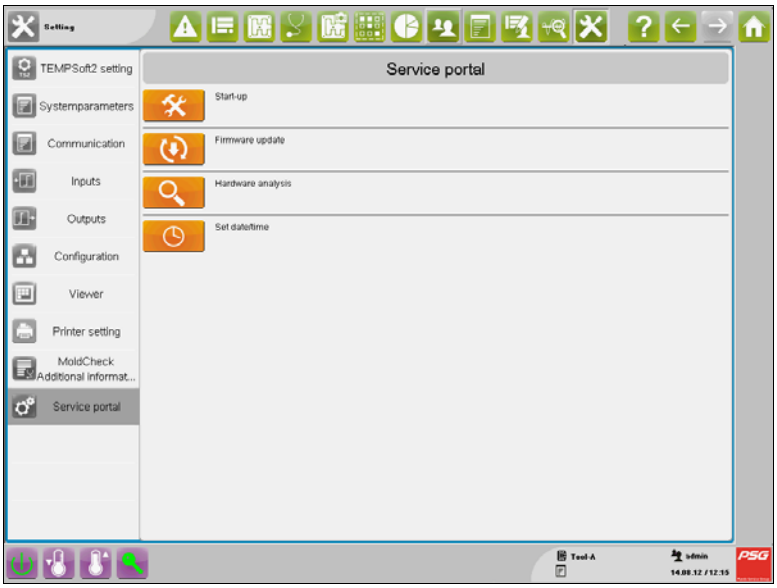
21.1.15Service portal

In the service portal are functions combined, that have to be executed at start-up and/or after changes of the system (e.g. at replacement of single components, to update the firmware).

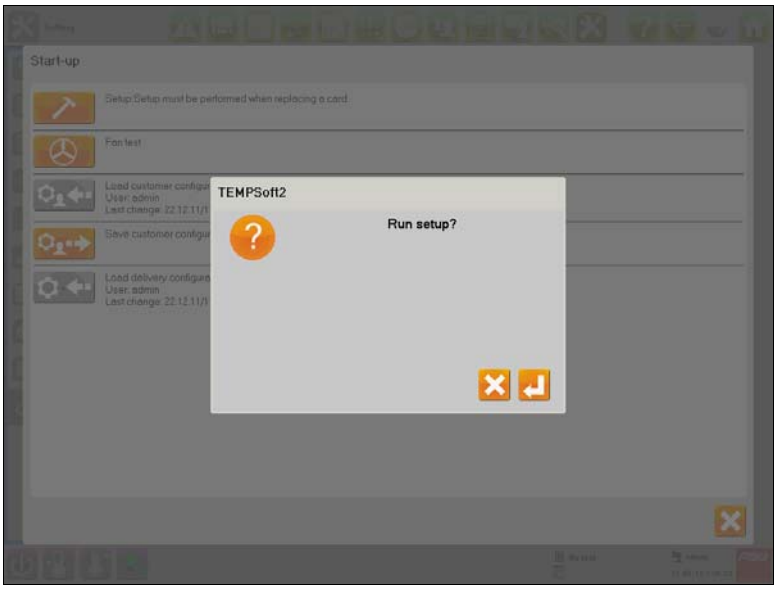
21.1.15.1Setup

After assembling one hot runner controller or replacement of individual components, there must be a re-addressing of the individual components of the internal CAN bus.

At initial start-up After replacement and/or exchange of single components	Execute function
Call setting	Press key
Select service portal	



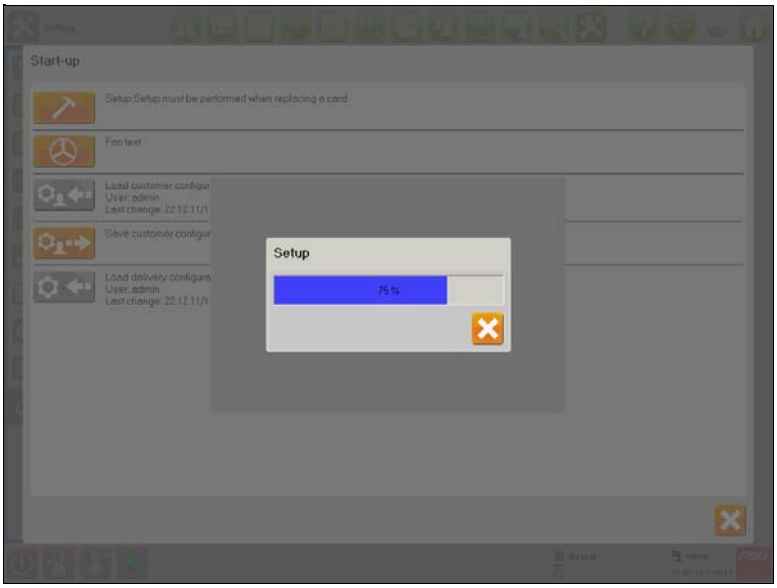
Press key



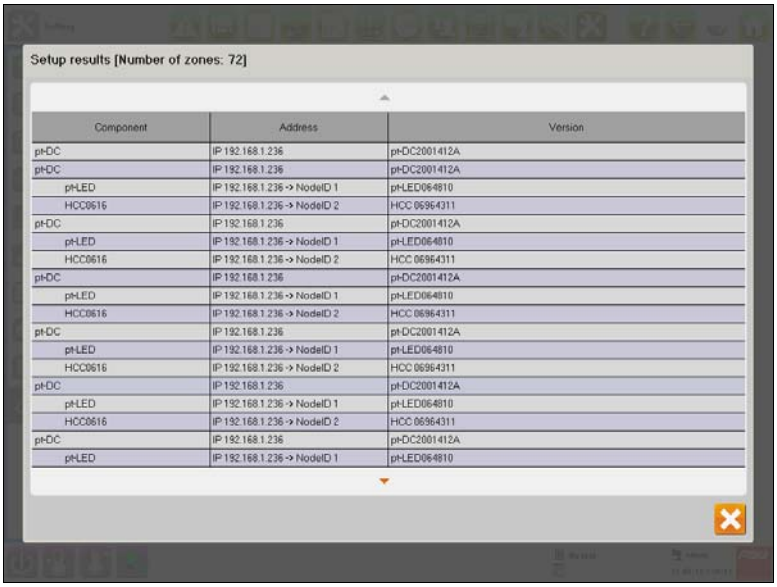
Should a setup be executed?

Press key

Confirm



Wait for end of function.

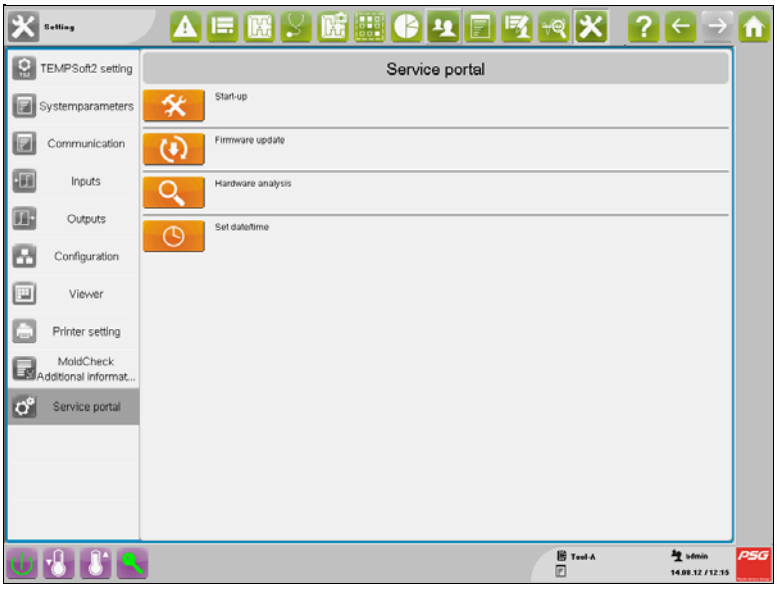
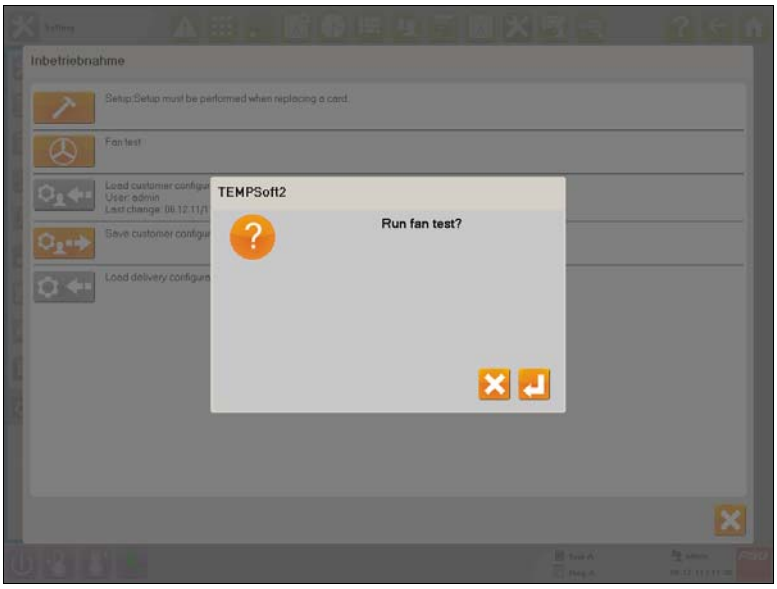


The result is a list where all determined components, during setup, are shown.

21.1.15.2 Fan test

The fans in the hot runner controllers are controlled by Power Plane Boards pT_PP_PCB. Check as follows

- All fans with even NodeID are activated 10 seconds by HCC06/16
- 10 seconds pause
- All fans with odd NodeID are activated 10 seconds by HCC06/16

At initial start-up After replacement of single components	
Call setting	Press key
Select service portal	
	Press key
	Should a fan test be executed? Press key Confirm

Watch the fans in the hot runner controller during test.
Wait for end of test.

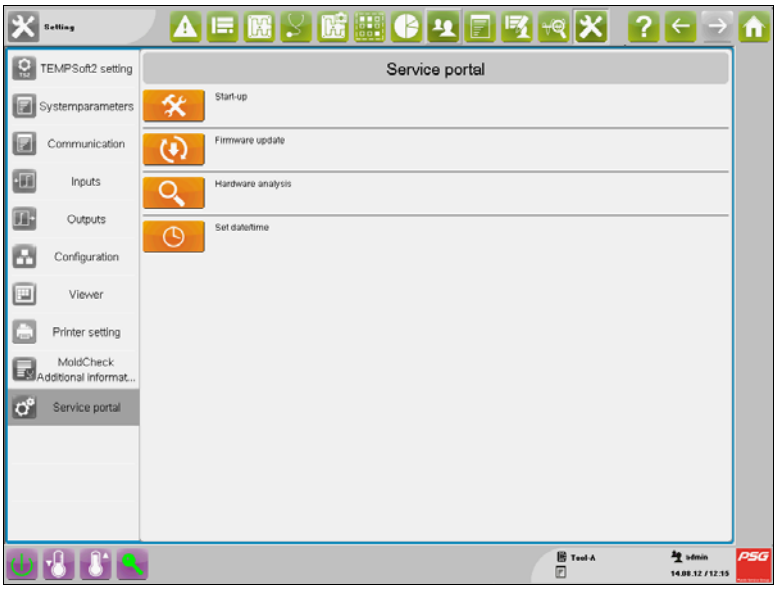
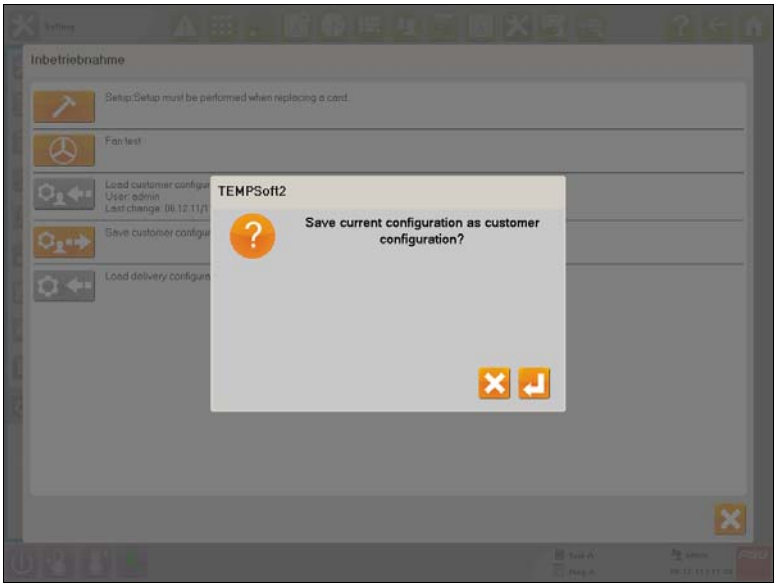
For Desktop fan from profiTEMP 012 Dd

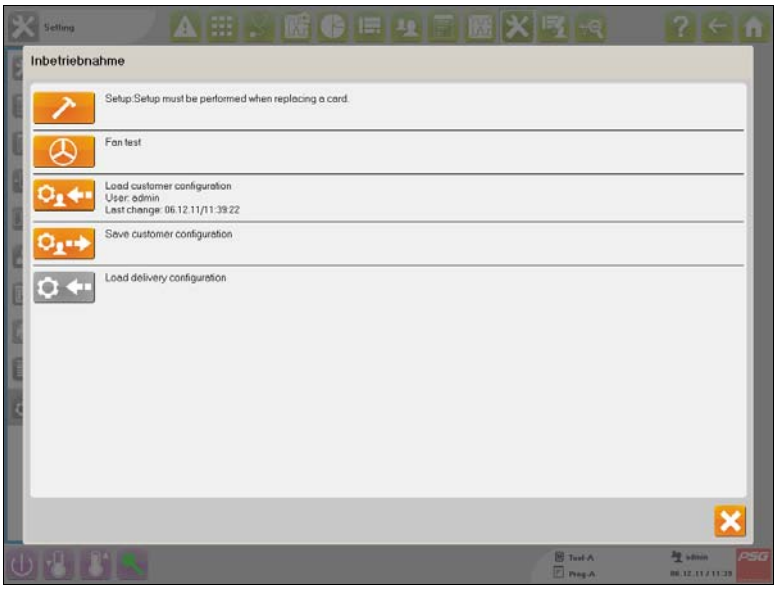
21.1.15.3 Store customer configuration

The customer configuration in **TEMPSoft2** means settings for

- Parameters
- System parameters
- Communication parameters
- In-/Outputs

These settings are stored in an internal buffer in **TEMPSoft2**.

Call setting	Press key
Select service portal	
	Press key
	Should the customer configuration be saved Press key Confirm



The latest saved customer configuration is displayed with user name and date of change in the menu.

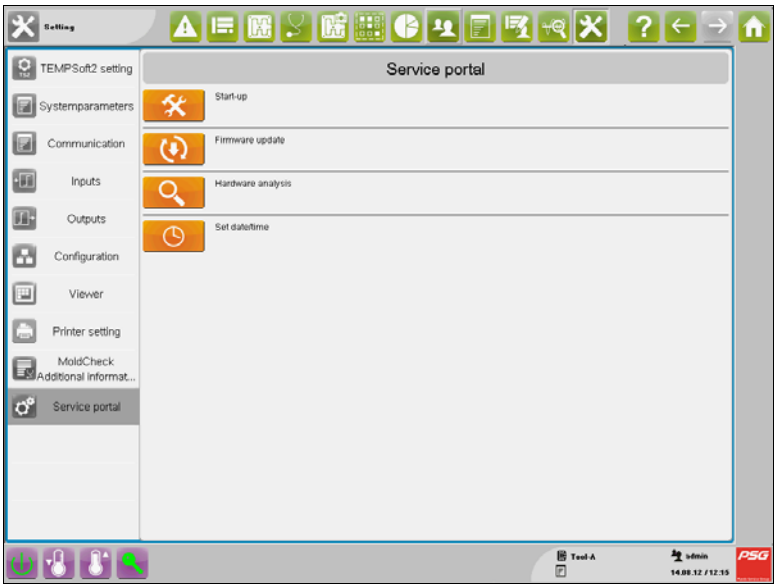
21.1.15.4 Load customer configuration

The customer configuration in **TEMPSoft2** means settings for

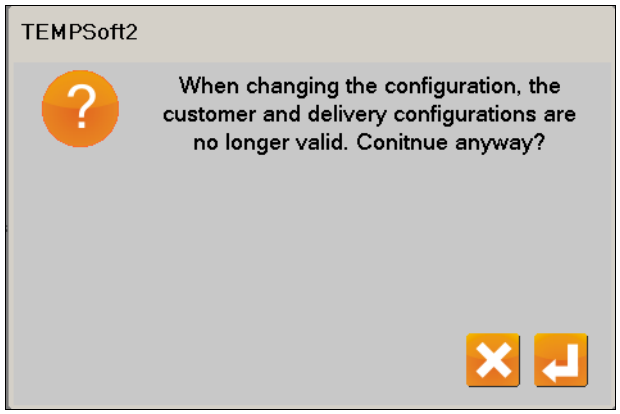
- Parameters
- System parameters
- Communication parameters
- In-/Outputs

These settings are loaded from **TEMPSoft2** into the hot runner controller.

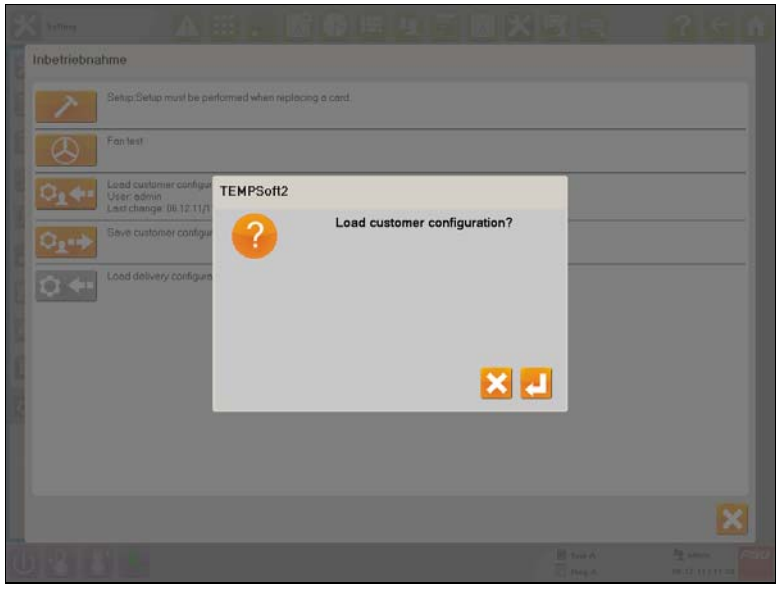
Call setting	Press key
Select service portal	



Press key


TEMPSoft2
When changing the configuration, the customer and delivery configurations are no longer valid. Conitnue anyway?

Key only active, when ↗Store customer configuration was activated before and no changes were made to ↗Configuration (except tool coding).
Changes in the configuration cause a message.



Should the customer configuration be loaded

Press key

Confirm

21.1.15.5 Load delivery configuration

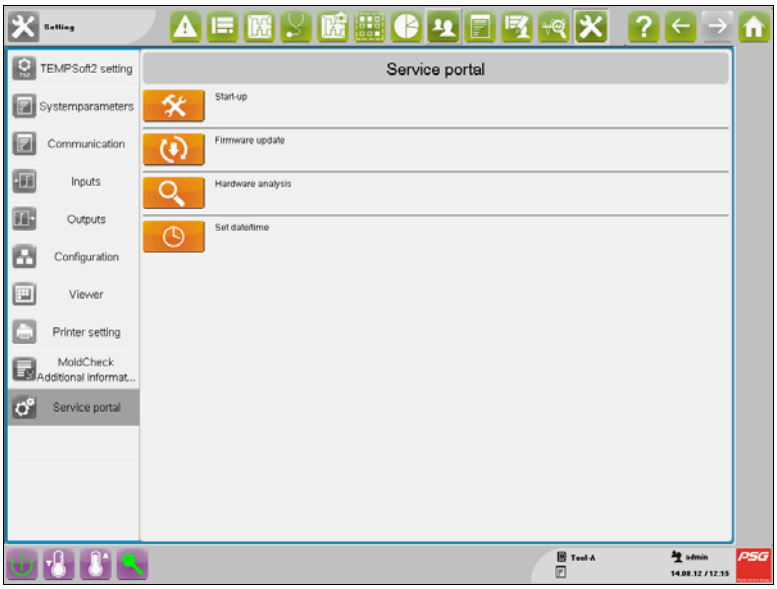
Delivery configuration in **TEMPSoft2** means settings for

- Parameters
- System parameters
- Communication parameters
- In-/Outputs

directly at the time of delivery. The delivery configuration is once saved by the user **Plastic Service Group** and is available for loading.

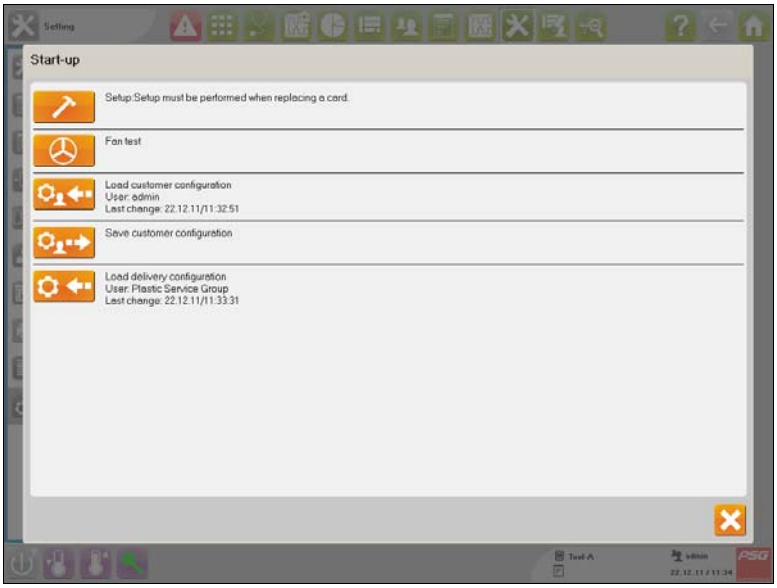
These settings are loaded from **TEMPSoft2** into the hot runner controller.

Call setting	Press key
Select service portal	



Press key

Key only active, when once saved by the user **Plastic Service Group** at delivery.



Should the delivery status be loaded

Press key

Confirm

21.1.15.6 Firmware update

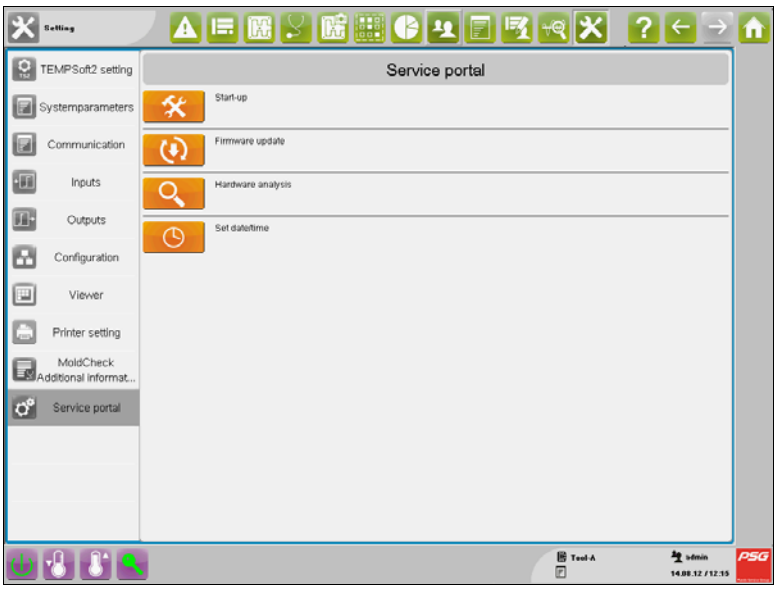
Continuously development and improvement of the products result in updates in form of HEX files for single components. With **TEMPSoft2** the software for the single components can easily be updated.

At start-up
After replacement of single components

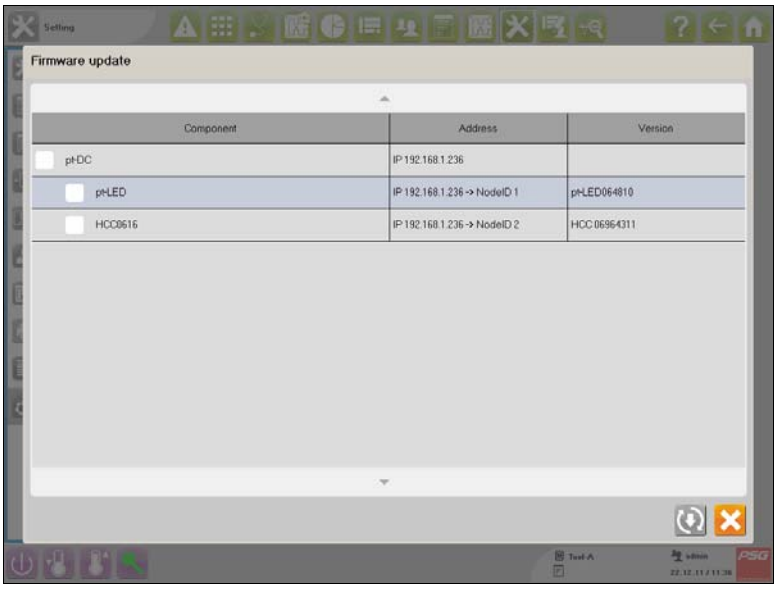
Call setting

Press key

Select service portal



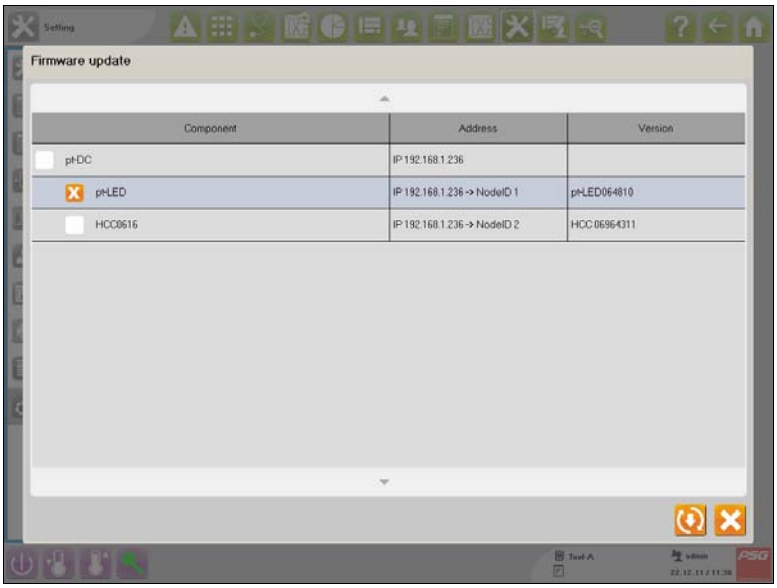
Press key



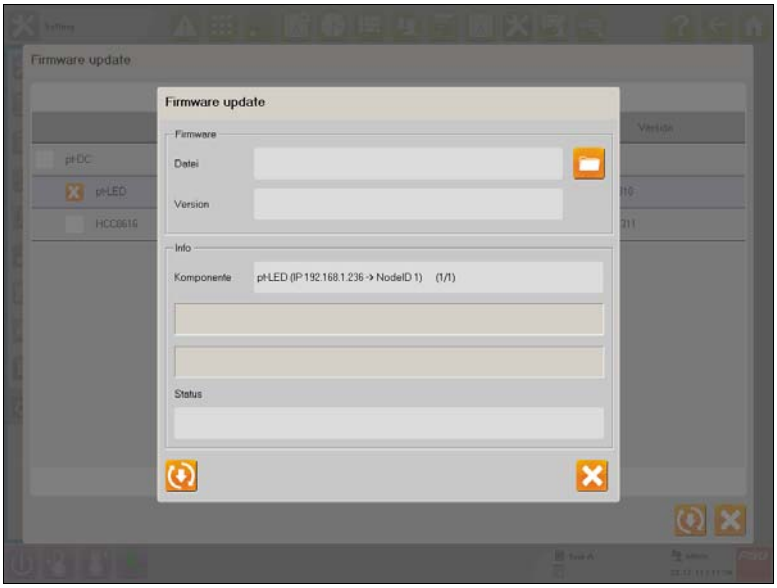
The connected components are shown.

Select component

Only one component can be selected!



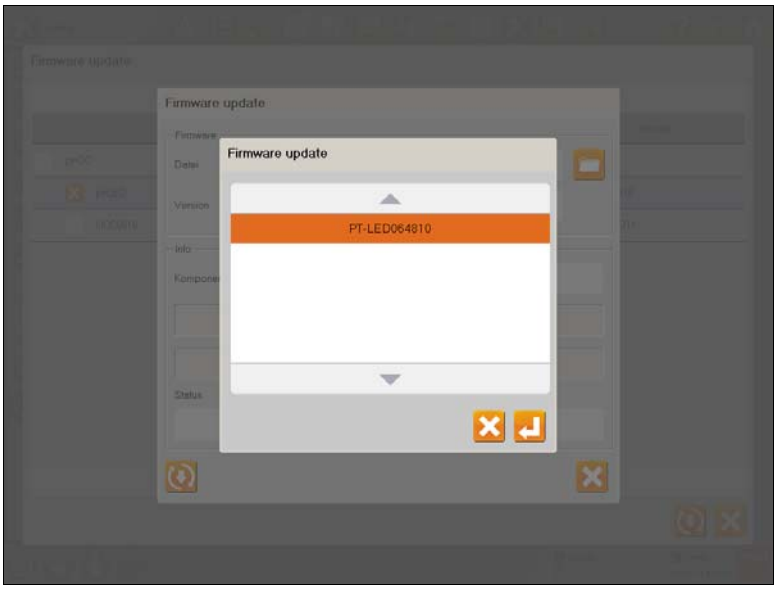
Call firmware selection menu



Press key

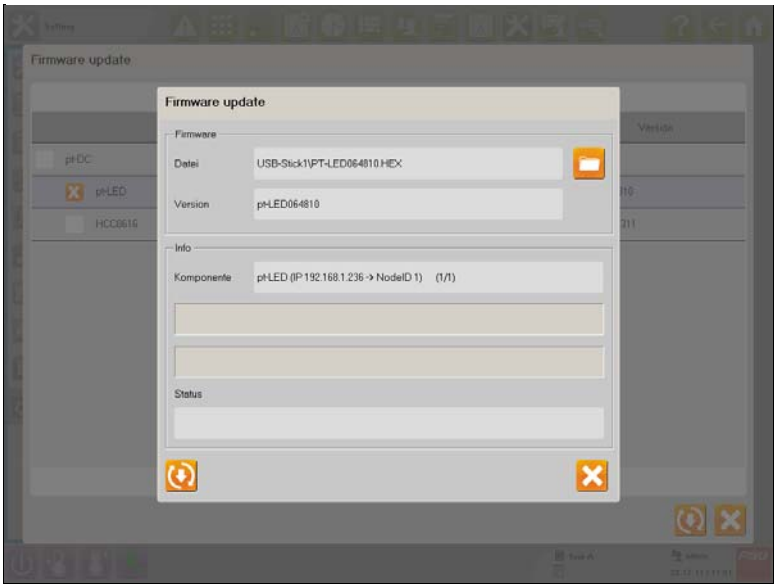
Is no USB stick connected, a message is shown and the function is canceled.

The HEX files must be located in the ROOT directory of the USB stick.

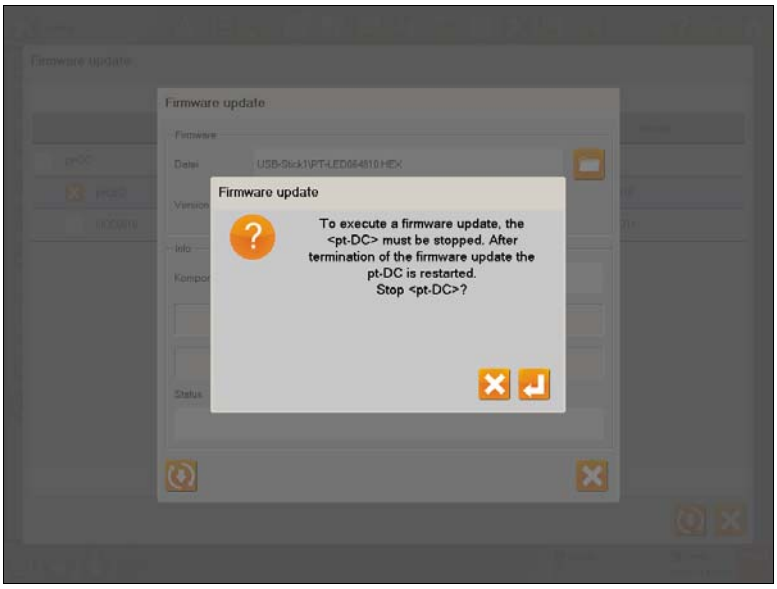


Files for the firmware update, appropriate to the component, are displayed in a list and can be selected by the user.

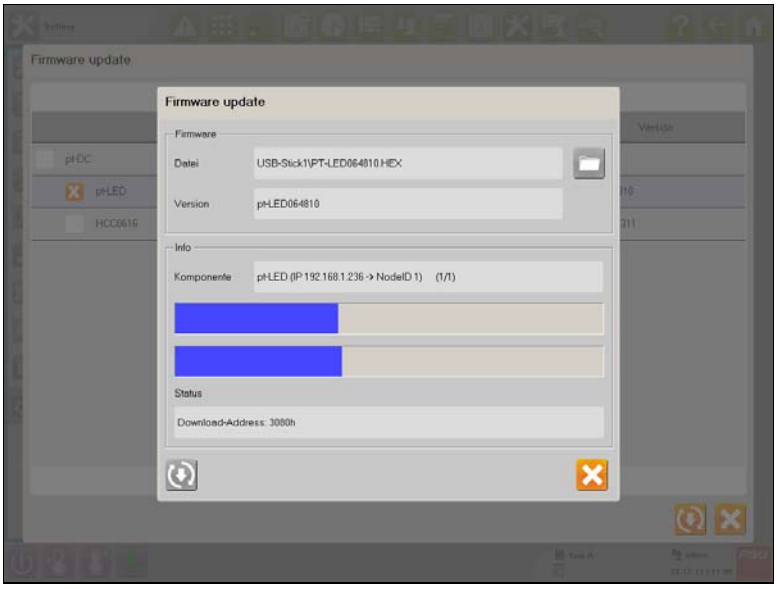
Confirm



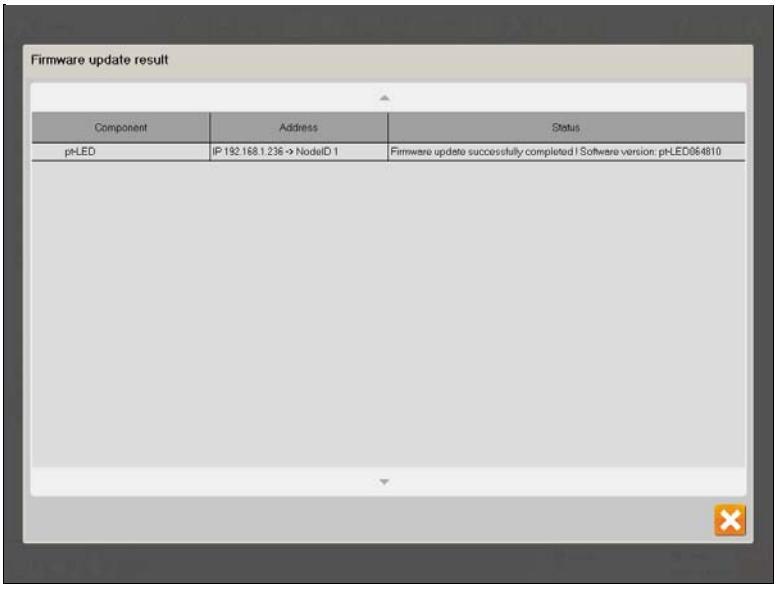
Start firmware update


Firmware update
Firmware update
To execute a firmware update, the <pt-DC> must be stopped. After termination of the firmware update the pt-DC is restarted.
Stop <pt-DC>?

Confirm



Wait for end of function

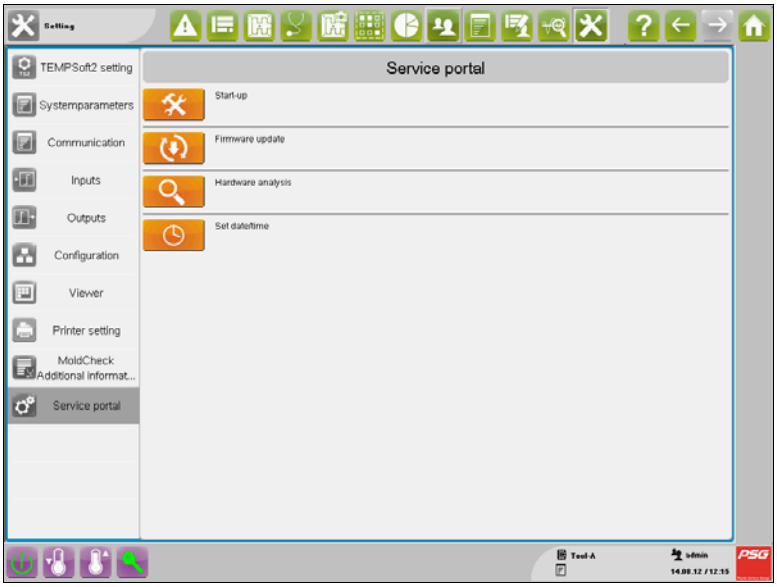
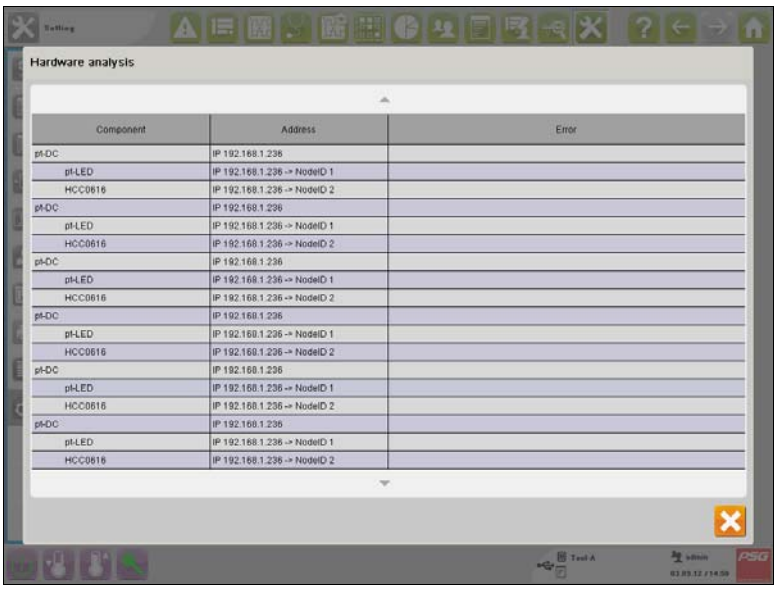


Display of result

Press key repeatedly until the function is finished

21.1.15.7 Hardware analysis

The hardware analysis lists all components. Existing errors are shown to the user.

Call setting	Press key
Select service portal	
	Press key
	The connected components are shown. Are errors existing, they are listed for the components.

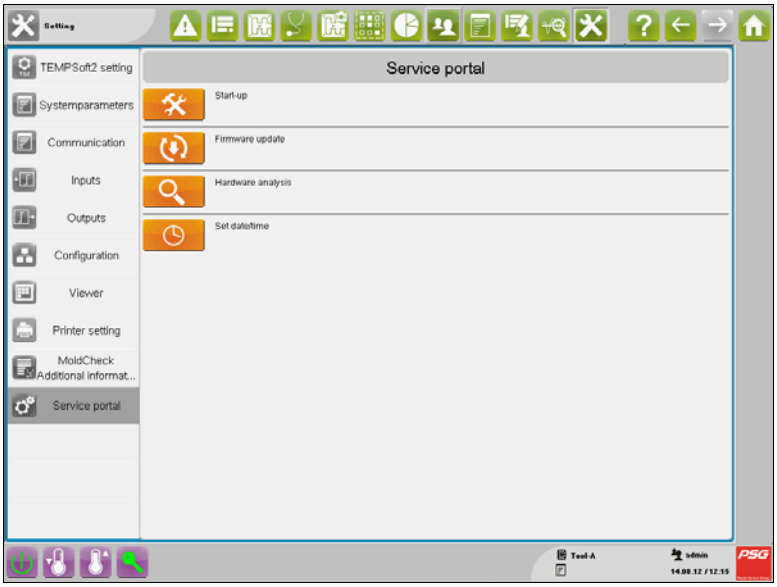
21.1.15.8 Set date/time

The system date/time can be changed here.

Call setting

Press key

Select service portal



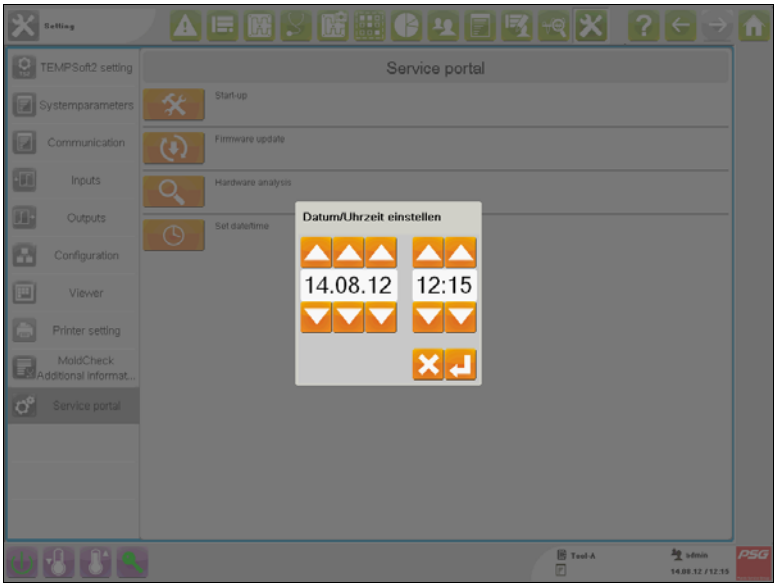
Press key

The change of date and time effects the data logging in log book and trend.

In the log book the change is registered and the incoming log book entries are registered with the date/time set.

The time for the data in the trend is corrected. A log book entry shows this.

Log book & Trend



Change numerical values by up/down key

Confirm or reject

22 Single point / Multi point

While the function **single point** (Standard setting) combines multiple hot runner controllers to a unit, e.g. two hot runner controller with 48 zones work as if they were a single hot runner controller with 96 zones, the **multi point** function provides central operation and monitoring of multiple hot runner controllers. The individual hot runner controllers are connected over Ethernet to a PC for operating.

With Multi point all data is centrally archived. If the tool is used with another injection molding machine, that data can be loaded into the controller manually or automatically (↗Tool Coding assumed).

All stored items, such as events and alarms in the Log book, can be displayed depending on the by view selected hot runner controller and are used to accelerate error analysis.

See ↗Multipoint
See chapter ↗Viewer

23 Appendix

23.1 Data storage for TEMPSoft2 application data

During the **TEMPSoft2** installation routine, it is stipulated where the application data are to be stored.

It is advantageous, as proposed, to store the program data and the user data in different partitions/disk drives, in order to enable further use of the application data at any time, in case of re-installation of the operating system.

Directory: D:\TEMPSoft2\TEMPSoft2\Tools\Global, when **No tool** is selected
Directory: D:\TEMPSoft2\TEMPSoft2\Tools\Global, when **a tool** is selected.

\Groups	Groups
\Images	Images
\MoldChecks	MoldCheck results
\MoldSnapshots	MoldSnapshot
\Prints	n.a.
\Programs	Programs
\Views	Views

23.2 Version History

Version	Date	Changes
1.00.07	9/1/2014	Valid for software version **TEMPSoft2** 1.0.5 In detail, the following amendments were made: ■ Typing errors corrected ■ Text for process monitoring, Heat‘n‘Dry specified ■ CtC, CtB specified ■ From software version 1.1.0 Multipoint ■ From software version 1.1.1 Polski / Polish
1.00.06	4/26/2013	Valid for software version **TEMPSoft2** 1.00.00 In detail, the following amendments were made: ■ Saving dialog extended (tool new/select another) ■ Reference MoldSnapshot/MoldCheck ■ InfoBoard new ■ Quality management new ■ Leakage current per phase for MoldCheckResult ■ Online help revised ■ Query for MoldCheck start new
1.00.05	9/14/2012	Valid for software version **TEMPSoft2** 0.09.20 In detail, the following amendments were made: ■ Service portal amended ■ Im-/Export to USB-Stick with directory structure ■ User defined view revised ■ Settings revised ■ Setting - communication, setting - service portal new ■ Views by current view ■ Specification of Process Monitoring, MoldCheck ■ Chapter trend amended ■ Chapter log book amended ■ Function print revised ■ User master added ■ Function zone selection none revised ■ Order of function keys revised ■ Function screenshot ■ Text for keys
...	...	...
		PSG Plastic Service GmbH Pirnaer Strasse 12-16 68309 Mannheim Germany Tel. +49 621 7162 0 Fax +49 621 7162 162 www.psg-online.de info@psg-online.de